THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

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LECTURE III.—PART IV.

Clinical Experience of Peptonised Food.

THE extreme difficulty of arriving at reliable conclusions in regard to the effect of therapeutical agents is well known to every sober-minded inquirer. The difficulty is not less, but probably greater, in judging of the effects of dietetic means. I have now had a considerable experience, extending over a period of two years, of the use by invalids of peptonised milk and peptonised milk-gruel, and it would be an easy task for me to recite a string of cases in which improvement and recovery followed the use of these articles of diet. But evidence of this sort would be wholly delusive unless checked by such an analysis of the circumstances of each case as would enable me to isolate the influence of the dietetic means. In the immense majority of cases such an analysis would be obviously impossible, the conditions to be taken into account would be too numerous, and their relative influence too difficult to determine. In a question of this kind one is obliged, in a large degree, to fall back on general impressions, and on deductions based on physiological considerations. Nevertheless there are certain cases—most of them cases of incurable disease—in which the conditions are sufficiently simple to permit direct trustworthy conclusions to be drawn.

I found that peptonised milk-gruel was generally preferred, as being more agreeable to the palate, to simple peptonised milk; and by far the larger number of my observations were made with the former preparation. I was also soon satisfied that, with most rare exceptions, peptonised milk-gruel was perfectly acceptable to the invalid's stomach, and that a diet composed exclusively of this article could be used for many consecutive weeks without the slightest sign of failure of nutrition.

The cases in which the use of peptonised aliment appeared to produce the most striking benefits were those in which complete anorexia prevailed, and those in which the stomach was intolerant of food, and immediately rejected every form of nutriment. A brief review of the results obtained in cases of this kind will, I think, prove instructive.

Uræmic Vomiting.—In advanced Bright's disease incessant vomiting is sometimes a distressing and intractable symptom. In some cases of this class I have seen the vomiting at once and permanently allayed by the use of peptonised milk-gruel. The downward course of the disease may not have been a moment checked, but the relief to the dying patient was great.

Gastric Catarrh.—That form of gastric catarrh which is the Nemesis of alcoholic excess often yields immediately to the use of peptonised food. In the later periods of cirrhosis there frequently prevails severe intolerance of every kind of food, the stomach rejecting even beef-tea and diluted milk in the smallest quantities. The relief afforded by the use of peptonised milk-gruel in some of these cases is most striking; the vomiting ceases almost from the first, and the intolerable sense of distension diminishes.

Crises of Cardiac Disease.—Persons suffering from cardiac dilatation and valvular incompetency usually encounter one or more crises which are susceptible of relief before finally succumbing to their disorder. These crises are marked by a general venous stagnation, with severe congestion of the lungs, liver, and kidneys, and rapidly rising dropsy. Associated with these symptoms there is generally almost complete inability to take food, and sleeplessness. In this condition I have seen marked relief follow the use of peptonised aliment. I have long observed, as I doubt not have many of you, that the condition here described is often alleviated in the most striking manner by the use of exclusively liquid nourishment, such as milk or milk-gruel, given in small portions sub-continuously, or sippingly, as it were, throughout the waking hours, the patient being never permitted to take a distinct meal, nor a particle of solid food. As my practice has been to direct, in cases of this class, the administration of the peptonised aliment in this sipping fashion, the gratifying results noted have been partly due to the mode of administration; but I have been convinced by more than one example, when the same liquid nourishment, in the natural and in the predigested condition, has been used in succession, that there was a distinct superiority in the predigested article.

Pernicious Anæmia.—In the earlier periods of this singular disorder, I am inclined to hope that predigested aliment may prove a valuable resource. In cases where the ailment, although fully declared, was still of comparatively recent origin, I have, in the last eighteen months, seen the disorder checked under the use of peptonised milk-gruel. In one case, owing to the irritability of the stomach, the milk-gruel was at first administered per rectum with pancreatic extract, but was afterwards tolerated by the stomach. In three of these cases the amelioration went on to complete restoration. In cases of longer standing I have failed by the same means to obtain the slightest improvement.

Gastric Ulcer.—The use of an exclusively liquid nourishment given sub-continuously, in the manner before indicated, is a well-known and most efficacious mode of treatment in these cases. But since adopting the plan of giving peptonised milk-gruel, I think I have perceived that the results were distinctly better than before, especially in cases associated with epigastric pain. The almost absolute rest procured by this food for the ailing organ appeared to be an additional advantage. I may be permitted to mention one case. The patient had suffered from copious and repeated hæmatemesis, and from severe epigastric pain. The irritability of the stomach was such that the simplest nourishment, given in the smallest quantities, was immediately rejected. Peptonised milk-gruel was, however, tolerated at once; vomiting only occurred two or three times during the first two days of the treatment, and then ceased, as did likewise the epigastric pain. This patient used no other food for a period of six weeks, and took daily from two to three quarts, with steady recovery of flesh and strength.

Pyloric and Intestinal Obstruction.—Peptonised aliment would appear to be especially suitable for use in these cases, but so far I have been somewhat disappointed in the results. The vomiting has generally been effectually controlled, but I have not been able to convince myself, in cases of pyloric stricture, that the fatal event was delayed even a single day. When the obstruction has been temporary, and due to a removable cause, the results have been of course more satisfactory.

I should be glad to see a further trial made of peptonised, or partially peptonised, milk in the gastric and intestinal catarrh of infants. In one severe case of this class a favourable result was immediately obtained; in another case there was greater tolerance of food, and more comfort after it, than with the use of simply diluted milk. It would be interesting also to have experience of the use of peptonised aliment in typhoid fever and in old age. The greater variety which can now be given to this form of food by the preparation of peptonised soups, jellies, and blanc-manges will obviate the monotony sometimes complained of under the continuous use of peptonised milk-gruel.

THE USE OF PANCREATIC EXTRACT AS AN ADDITION TO FOOD SHORTLY BEFORE IT IS EATEN.

The administration of pancreatic extract with, or immediately after, a meal, can, I think, have only a limited utility. On entering the stomach the pancreatic ferments encounter the acid of the gastric juice, and when this rises above a certain point the activity of the ferments is destroyed. Still, a not inconsiderable interval of time must elapse before this point is reached, and during this interval the pancreatic ferments can accomplish a certain amount of work. I have repeatedly administered pancreatic extract in this way, but I am unable to say positively that I have seen benefit from this mode of administration. There is, however, a modification of this plan, which I have lately put in practice, that promises better results. It is to add the extract to the food

fifteen or twenty minutes before it is eaten. Certain dishes commonly used by invalids—farinaceous gruels, milk, bread and milk, milk flavoured with tea or coffee or cocoa, and soups strengthened with farinaceous matters, or with milk—are suitable for this mode of treatment. A teaspoonful or two of the liquor pancreaticus should be stirred up with the warm food as soon as it comes to table. And such is the activity of the preparation that even as the invalid is engaged in eating—if he eat leisurely as an invalid should do—a change comes over the contents of the cup or basin—the gruel becomes thinner, the milk alters a shade in colour, or perhaps curdles softly, and the pieces of bread soften. The transformation thus begun goes on for a time in the stomach, and one may believe that before the gastric acid puts a stop to the process the work of digestion is already far advanced.

This mode of administering pancreatic preparations is simple and convenient. No addition of alkali is required, and of course no final boiling. The only precaution to be observed is that the temperature of the food, when the extract is added, shall not exceed 150° F. (65° C.) This point is very easily ascertained, for no liquid can be tolerated in the mouth, even when taken in sips, which has a temperature above 140° F. (60° C.) If, therefore, the food is sufficiently cool to be borne in the mouth, the extract may be added to it without any risk of injuring the activity of the ferments.

Pancreatic Extract as an Addition to Nutritive Enemata.—Pancreatic extract is peculiarly adapted for administration with nutritive enemata. The enema may be prepared in the usual way with milk-gruel and beef-tea, and a dessert-spoonful of liquor pancreaticus should be added to it just before administration. In the warm temperature of the bowel the ferments find a favourable medium for their action on the nutritive materials with which they are mixed, and there is no acid secretion to interfere with the completion of the digestive process.

I have now had some experience in this method of alimentation, and have been satisfied with its success. In one case a patient suffering from post-pharyngeal abscess, which entirely occluded the œsophagus, was nourished exclusively for a period of three weeks (until the abscess broke) on enemata of milk-gruel mixed with pancreatic extract.

Clinical Lecture
ON
ERB'S SPASTIC PARALYSIS.

Delivered at Glasgow Royal Infirmary, Dec. 8th, 1879,

BY M. CHARTERIS, M.D.,
PROFESSOR OF MEDICINE, ANDERSON'S COLLEGE.

GENTLEMEN,—I desire to draw your attention to-day to a rare form of spinal disease, which, from the accurate description given of it by Erb, Professor of Electro-Therapy at the University of Heidelberg, is now named after its author. An analogous affection is, by Charcot, designated "amyotrophic lateral sclerosis," and "spasmodic dorsal tabes." These terms seem too vague, and Erb's nomenclature, conveying a certain clinical picture, appears to be the justest and the most likely to be lasting.

You all know in a general way what is meant by the word "paralysis." It conveys the idea to a greater or less extent of loss of motion, inability to perform actions which in health are easy and natural. Clinicists have, in regard to spinal diseases, described certain peculiar gaits. Thus when there is more or less extensive paralysis of the lower extremities before complete loss of motion has been established, it is noted that the patient walks with a shuffling gait, dragging his feet after him, with the tips of the toes pointed to the ground, and the heel raised high. This is called "the paralytic gait."

Again, if there is disturbed conduction of muscular movements in walking; if the patient throws his foot forward and outward with force, and brings it to the ground heel first with a decided stamp; if, further, his eyes are constantly on the ground, and he reels and staggers when this is not the case,—the gait is termed "ataxic."

A further gait is described as the "spastic gait." Here the patient has also a peculiar characteristic walk or run, as it may be termed. For the feet seem to clear the ground, and the tips appear to feel obstacles in every inequality of the surface, so much so as to give rise to a hopping elevation of the whole body, which is slightly bent forward, the legs meanwhile keeping close together, especially at the knees. This gait depends on muscular tension, and reflex contractions in the various groups of muscles, which are set in activity during the process of walking.

In "spastic paralysis" the earlier symptoms in movement are as I have mentioned, and hence the disease I speak about to-day is termed "spastic paralysis."

Before giving the history of the patient before you let me attempt to explain the pathology of the disease. I know that the "ataxic gait" is associated with disease of the posterior columns of the spinal cord. I know that with this "ataxic gait" there is disturbed sensibility; that, to take one prominent feature of the disease, there is an absence of the tendon-reflex; that when I strike the patella smartly there is no response, no reflex contraction takes place, the leg remains as it were dead and lifeless. But in this other form of paralysis, "spastic paralysis," there is great increase in the reflex action of the tendons, not merely the tendon of the patella, but also of the tendo Achillis and of the adductors. If, therefore, as post-mortem evidences show, the ataxic gait means disease of the posterior columns, posterior gray horns, the central gray substance, and probably also a great part of the anterior gray horns, we exclude these divisions of the spinal cord from participating in the disease in question. Of course, also, we must exclude the brain.

Where, then, can we localise this disease? We have only got for this purpose the so-called motor portions of the spinal cord—i.e., the antero-lateral columns, and perhaps also a portion of the gray substance. Still further generalising, and consequently dogmatising from our present physiological knowledge, we exclude the anterior columns proper as being implicated in a disease which, as you will afterwards observe, has paralysis without atrophy of the affected muscles. We reduce our field of observation to the lateral columns of the spinal cord. Here, accordingly, is the seat of the disease. Here, says Charcot, and with him Erb, we have a chronic inflammatory process going on; here, in the posterior divisions of the lateral columns, we have the highly probable anatomical basis of "spasmodic spinal paralysis."

So much having been said for the pathological explanation of this disease—an explanation which in theory seems excellent, but which from the limited number of cases as yet recorded has not been verified by post-mortem examinations—let me now direct your attention to the leading features of the history and present condition of our patient.

You observe as she lies in bed, with her body covered, that her face is full and well-nourished; that her eye is not wanting in intelligence, and that her general expression is, so far as you can see, that of a healthy, contented woman. If you ask her questions, she will give rational and satisfactory replies. She notes everything that is going on, takes a lively interest in other patients in the ward, and reads newspapers and other periodicals with avidity. Take away the bedclothes, and you will see that her legs are drawn up, that they are bent at the knee to such an extent that one of them actually touches with the heel the corresponding hip. You will note further that at the knee they meet, and require force to separate them. Try to extend either leg and you will find you cannot do so beyond a certain point, for the hamstring muscles with their tendons will not allow them to proceed further, and on desisting from your efforts they slowly return to their original position. Test the sensibility and you will readily perceive it is not affected. Tap the patellar tendon, and you will see a quivering movement of the foot in response. Similarly tap the tendo Achillis, and there is passive dorsal flexion of the foot. Tap over the region of the lumbar vertebræ, and you excite the activity of the tendons of the adductors. Note also that the muscles of the leg and thigh, though flabby, are in no way atrophied.

Such is the patient's present condition—a condition which very fully and faithfully illustrates Erb's clinical picture of the disease. What, it may be asked now, was her past history—what her condition when admitted six months

ago into the wards. Well, the report of her case states that she is thirty-six years of age, that for twenty of these years she has been married, and that she is the mother of ten children. Her confinements were easy, and her health good until she became pregnant with the tenth child, when she experienced an uneasy feeling, but not actual pain, in her back. This uneasy feeling—weakness she terms it—continued during the whole of her pregnancy. When she came to the full term, twelve months ago now, she was delivered of a healthy child after a somewhat lingering labour. The placenta came away naturally, but after that she never "saw anything," not even the ordinary lochia. She kept to her bed for three weeks, the weakness in the back being more apparent. It was not, however, until the expiry of that time that, on attempting to get out of bed, she noticed that, though able to put her feet to the ground, she was unable to walk without her crutches. "I thought," she said, "this would pass away, but it did not, and day by day I noticed I could with greater difficulty put my heel to the ground. I could only place my toes there. Then I became alarmed, and applied for admission to the Infirmary." She continued to suckle her child until the day of admission.

The report goes on to state:—The patient is well nourished, her countenance cheerful, her understanding clear, and speech unaffected. She lies in bed upon her back, with her thighs flexed slightly upon the pelvis and her legs forcibly upon the thighs. The adductor muscles of the thigh are powerfully acting, so much so that the knees are locked forcibly together and cannot be separated, neither can the legs or thighs be extended to any great degree. She has no tenderness about the spine, no giddiness in the head, no sense of constriction round the abdomen; and she states that at the onset of her disease she had no difficulty of walking with her eyes shut or in the dark. Sensation is complete in both her limbs, but the motor power is lost. When the limbs are touched in any part, violent reflex actions are excited in the muscles of the thigh and calf. The cardiac and respiratory systems are normal. With regard to the digestive system, it is noted that the appetite is good, tongue clean, bowels somewhat constipated. She has complete control over the rectum. Under the genito-urinary system it is observed that the urine contains no albumen or sugar, and is slightly acid in reaction. From the day of her admission until this date she has menstruated regularly.

You will observe that there has been little change in the patient's condition now from what it was six months ago. We have tried every remedy which might be considered useful, but without effect. The "constant current" has never been omitted, but though some hope was entertained of it at first, this has had to be abandoned. Under chloroform, it may be added, the limbs could not be extended any further than without it. She now desires to return home, and to this I can place no obstacle in her way, for unfortunately I know of nothing which will tend permanently to benefit her interesting but unfortunate state. This is the first true case of the kind, so far as I am aware, which has been reported from the west of Scotland.

THE DISEASES OF THE EYE OCCURRING IN CONNEXION WITH PREGNANCY.

BY HENRY POWER, M.B. LOND., F.R.C.S. ENG.,
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(Concluded from p. 769.)

THE formation of the white patches in albuminuric retinitis may take place with great rapidity. A case, though not occurring in pregnancy, fell under my care, in which very large patches appeared in the course of three days, the functional activity of the retina being of course abolished in those parts where they existed.

As a matter of prognosis it may be said that hæmorrhages, even of somewhat large extent, will be absorbed. The white spots I am less certain about, but think they also disappear in time, though more slowly than the hæmorrhages.

In regard to treatment I have nothing to say, since it is necessarily the same as that applicable to the renal disease, and no special treatment is required for the eyes.

Mr. Macnamara has recommended the induction of premature labour in these cases, and has (THE LANCET, vol. ii., 1878, p. 842) recorded a perfectly successful case which was under his own and Dr. Potter's care. On this point it would be interesting to obtain the opinions of those who are specially engaged in the practice of midwifery, particularly in regard to the period when premature labour would under these circumstances best be induced.

Passing from these I may now briefly refer to intracranial disease as occurring in pregnancy.

The sudden loss of a large quantity of blood in delivery has been known to produce partial or complete loss of vision. No instance of this kind has come under my own observation, but the following is a good example of it, and I am indebted for it to Dr. J. P. Atkinson of Bampton. "In July, 1874, I attended the wife of a clergyman in her eighth confinement. All went well until the expulsion of the placenta, when frightful hæmorrhage took place, which, however, after some time I succeeded in arresting. I then found she had lost the faculty of sight of her right eye. This, however, returned in a few hours, and she made a good recovery. Last year, when visiting some friends in Norfolk, she had an attack of facial palsy of the right side. The palsy got gradually better, but on her return home I saw her; she was very nervous, vision weak on right side. Upon ophthalmoscopic examination I found the right retina decidedly anæmic, and she assured me her sight on that side had never been so good since her last confinement. She is now better, but still complaining."

In such a case as this I presume the sudden withdrawal of blood from the system either leads the vessels of certain regions of the brain to contract so firmly that the circulation is never again restored through them, and the nutrition of the part fails from defective supply of pabulum, or the sudden diminution of pressure occasions some lesion of the delicate tissue of the central nervous system.

In regard to the intracranial diseases of the eye occurring in pregnancy, I fear they should almost be classed under the head of "anomalous affections." They are cases of more or less complete loss of vision in which we are unable to localise the disease, and are obliged to launch out into the airy regions of speculation to afford an explanation. The difficulty occurs in all those cases in which the patient complains of impaired vision, and in which no disease can be recognised under ophthalmoscopic examination. The part affected being beyond our ken, we guess that some part of the optic nervous apparatus is diseased, using the term in its widest sense, and as including the optic nerve, chiasma and tract, the optic lobes or corpora quadrigemina, the posterior part of the optic thalami, the cerebellum, and lastly, if the localisation of the cerebral functions be a fact and not a theory only, the cerebral centres of vision, which are probably situated in the occipital lobes of the hemispheres.

The discovery of the ophthalmoscope five-and-twenty years ago has enabled us to materially reduce the number of cases that were formerly included under this head, and the inability of the older writers to see beyond the lens renders it impossible to arrive at an absolute conclusion in regard to many of the cases they record.

The following are one or two cases that have fallen under my care, and I think it may be said that, however slight may be the visible change in the disc and retina of the eye or eyes affected in the early period, they almost always pass into white atrophy. We may meet with a perfectly blind eye, or with an eye in which part of the field of vision is perfectly blind; but I believe it will be found that we rarely or never meet with an eye that has been completely blind for some time, say for a few months, without finding atrophy present, the disc being whiter than natural.

Feb. 27th, 1880.—Fanny O——, a delicate-looking woman, aged forty, states that she could see perfectly well with both eyes up to Sept. 1st, 1879, which date was twenty-two days before her confinement. For several weeks previously she had slept badly, and during the earlier months of her pregnancy had experienced continuous pain for weeks together, both night and day. The pain had, however, greatly diminished before Sept. 1st, the date of her attack. On the night of that day, being much exhausted, she went to bed early, and awoke about daybreak with curious sensations in her left eye, which she described as a quivering before her eye, a kind of bubbling "like round bubbles of water, yellow and green, different colours." A darkness then came over the eye, which in the course of two or three

days became so thick as to obscure all objects, and she was only able to see light with the upper part of the retina—that is to say, she could on looking upwards dimly see things at her feet. By degrees even this amount of vision went, and she was for a time quite blind with the left eye. On Sept. 23rd she was confined of a healthy child still living. Fourteen days after her confinement vision gradually returned in the left eye, but never perfectly. She could see everything in the room, "but there was a flickering about." "It seemed as if the room was in twilight" when she closed her right eye. This state continued for ten days, and she then lost her vision completely and permanently in the left eye. The vision of the right eye was above the average, $\frac{2}{1}\frac{0}{1}$. The tension of both eyes was normal. Ophthalmoscopic examination showed complete white atrophy of the left optic disc, but no other abnormal appearance. She stated that she had had fourteen children, the first six of which were still-born. She has only four living. She had been compelled to lift some heavy furniture in the course of her last pregnancy.

I expected in this case to find the indications of present or past detachment of the retina or of hæmorrhage, but the ophthalmoscopic examination only revealed pure and simple white atrophy, the question of the cause of which is not easy to answer. The numerous deaths amongst her children point to a syphilitic history, but I could obtain no account of the occurrence of any attack. The arteries and veins were too numerous and full to admit of the possibility of embolism. Was it a case of embolism of a vessel supplying one of the corpora quadrigemina, or was there some lesion of the visual cerebral centre? The return of the vision for a short time, though impaired, is a remarkable feature of the case.

Here is a similar case, for the notes of which I am indebted to my dresser at St. Bartholomew's, Mr. Cooper.

J. A——, a moderately well-grown, healthy-looking woman, with fair complexion, brown hair, blue eyes, and some traces of small-pox; admitted into St. Bartholomew's, complaining of loss of vision in the right eye, which has come on rather rapidly in the course of the last two months. The patient had a still-born child twelve months ago, and is now in the sixth month of her pregnancy. About two months ago she had severe headache, which especially affected the right temple. Both eyes then became dim, and ultimately blind, but the left eye soon recovered vision. Her life generally had been regular, and there was no specific history; but she seems to have been poorly fed, as she had been accustomed to drink large quantities of tea. On examination the vision of the right eye was found to be abolished; the cornea and media clear; the iris acting sluggishly. Disc well defined; paler than that of the opposite; probably passing into white atrophy; the outer half whiter than the inner. The whiteness is not so advanced as to attract attention, unless blindness was known to be present, but is perceptible when the two discs are quickly examined one after the other. The arteries are few and small. There is a little pigment along the inner side. Tension normal. — Left eye: Cornea and media clear; iris acting well; the disc rosier than that of the right eye. Tension normal. Vision $\frac{2}{3}\frac{0}{3}$, not improved with glasses. In a good light can read 1½ Snellen.

The following is a case that was under the care of Mr. Mackinlay, who kindly directed her to see me.

C. H——, aged twenty-four, a tall, pallid woman, states that she was married two years and half ago, and in the course of the first year gave birth to a healthy child, which she nursed for eleven months. She lost many of her teeth during this pregnancy, and was feeble. During the last year or two she has been much worried by domestic affairs, and is now in the sixth month of her pregnancy. Her left eye began to fail six weeks ago. Right, amblyopic from birth. The tension of both eyes is normal. She knows that the vision of the left eye has failed because she cannot now recognise objects on the opposite side of the street, which she has always been accustomed to do, and she has to bring work close to her eye. The left: V. = $\frac{2}{6}\frac{0}{0}$, and she can with difficulty read Jäger No. 2 at nine inches. She is not improved with glasses. The refraction emmetropic with the ophthalmoscope. She was a patient at the South London Ophthalmic Hospital eight years ago for her right eye, and some medicine was prescribed for her. With this eye she can only see large objects, and the internal rectus is insufficient, so that there is a permanent external squint. By an effort of the will she can roll the eye inwards. She is a total abstainer. She recognises colour well. The fundus is to all appearance thoroughly healthy. The vessels of the disc are large and numerous. The failure of vision in this instance seemed to me to be attributable to physical exhaustion and to an anæmic condition of the nervous system generally.

In view of these very remarkable and very limited local affections of the eyes, it may be expedient to refer to a condition that is in some respects parallel to it—the not unfrequent occurrence of chorea in pregnancy. (For an excellent paper on this subject the reader is referred to Barnes' "On Chorea in Pregnancy," "Obstetrical Transactions," vol. x., 1869, p. 147.) From the large number of cases adduced by Dr. Barnes it seems probable that this affection owns three causes at least. First (as believed by Drs. Kirkes and Hughlings Jackson) the detachments of small vegetations from the mitral or aortic valves producing embolism; secondly, a shock to the nervous system which is not unfrequently associated with some disease of the central nervous system, such as congestion or pale softening of the nerve-centres, a clot of blood in the velum interpositum, softening of septum lucidum and corpus callosum, or of the spinal cord. Lastly, as Dr. Barnes is disposed to think, it may be due to some alteration in the nature of the blood; or possibly, as Dr. Fitzpatrick in the discussion on the above paper suggests, to anæmia of the nervous centres.

It will be noticed that in many of these cases the disease is progressive, which seems to me to be rather opposed to the embolic theory. I think if the arterial supply to one of the nerve-centres—say to the nates or testes—were suddenly arrested, the function of the part would be abolished permanently unless collateral circulation were established. In that event recovery would take place; but I know of more than one case where partial recovery did take place and yet relapse occurred, ending in total blindness. This is not what we should expect to occur if collateral circulation began to be established.

I think I have now drawn attention to the principal forms of ophthalmic disease that occur in, or that are connected with, pregnancy. It will be seen that whilst some of these conditions are capable of being relieved with facility, others possess exceptional interest in enabling the practitioner to determine the treatment that should be pursued in certain cases of pregnancy that present special difficulties and dangers.

ON MEDICAL CERTIFICATES OF INSANITY.

BY T. N. BRUSHFIELD, M.D.,
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(Concluded from p. 764.)

IN the "statement" appended to the order of admission in present use, the relieving officer in the case of a pauper, and the relative in that of a private patient, is required to give a number of particulars relating to the patient's history, &c., among which are the following:—"Duration of existing attack; supposed cause; whether subject to epilepsy; whether suicidal; whether dangerous to others." It has always appeared to me an anomaly why the statute requires the answers to these to be furnished by the relieving officer (or by the relative in the case of a private patient). They all relate to the medical history of the patient, and have to be investigated by the practitioner before writing his certificate. No one with a shadow of reason could affirm it was the kind of information that ought to be supplied by any other than a medical man. The result is that at present the particulars given are most unreliable and valueless, and are frequently directly opposed to those contained in the medical certificate. The "duration of existing attack," and "supposed cause," are rarely stated correctly; this is especially the case in epileptic mania and general paralysis. It is not to be expected that a relieving officer can be a physician or pathologist, yet in one instance that came under my notice that official assigned the cause to be "paralysis in the brain." Some of the most common entries are "disease of the brain," "inherited," "despondency" (mistaking the

effect for the cause), "fits," &c. Surely the education a relieving officer has received does not make him competent to supply the proper particulars. No doubt many of them do their best to furnish them, but bad is the best at all times. Again, it is not advisable that the cause of insanity in young females should be investigated by an ordinary lay parochial officer. It ought to be considered entirely out of his province to do so, and yet I have met in the certificate with the entry "irregularity in monthly courses." Amenorrhœa is a common cause; in one instance of this, the mental malady was assigned to "a fall." Cases the intimate causes of which may be associated with syphilis or masturbation require the greatest caution and tact on the part even of a medical man to inquire into. I hardly need cite further examples. Fortunately the relieving officers are able to shelter themselves under the term "unknown"; and many do this to a considerable extent with respect to nearly all the heads of particulars required, and that, too, when the information was readily obtainable.

The condition as to epilepsy is often wrongly stated; its presence being affirmed or denied in direct opposition to the fact. Everything that can be set down to "fits" is assigned to epilepsy, making the latter term a very inclusive one. Within my own knowledge, cases of hysteria, ordinary syncope, convulsions, epileptiform attacks in general paralysis, &c., have been so included. Within the present year two patients have been received into the Brookwood Asylum, both of whom were asserted to be the subjects of epilepsy. Neither of them was epileptic, but in either instance there had been a sudden attack of apoplexy with slight hemiplegia. It is hardly to be expected that a non-medical person could appreciate the difference between the two sets of symptoms. The prognosis in the two diseases being so different, it was of essential importance to ascertain in these cases whether epilepsy was present; fortunately their respective histories were obtained, and the true character of the "fits" was found out. One of the two has been discharged recovered, a very improbable result had epilepsy been associated with the insanity.

The particulars furnished by the relieving officer as to whether the patient be dangerous to himself or to others are often contradictory to those recorded by the medical certifier. "Uncertain" and "scarcely" are the occasional replies. Practical psychologists are well aware that all patients with melancholia should be regarded as having a tendency to commit suicide, but a relieving officer never reports them to be suicidal unless a threat or an attempt has been made, and not always then. In one instance, "whether dangerous to others," was answered in the following remarkable manner, "No, not to humane beings, but cut a cat's head off." I think there can be no reasonable doubt that not only ought all these particulars now supplied by the relieving officer to be furnished by the certifying practitioner as the proper person, but that he is the *only* one who should, and who is competent to, investigate and to record all such matters.[1]

Two important points in the patient's history are rarely mentioned. The first relates to the habits of the patient as to temperance or intemperance, more particularly if the latter manifested themselves after symptoms of insanity set in. The second has regard to any hereditary predisposition. A short time since I noticed the following printed interpolation in the statement accompanying an order of admission:—"Any relation affected with insanity; if so, state relationship." In this particular instance the reply was, "A cousin insane." This would have been of more value if the "cousin" had been stated to be a paternal or a maternal one. But the inquiry should not be limited to any family history of insanity alone, but should be extended to all forms of nervous diseases—epilepsy, paralysis, chorea,—and should even include any marked habits of intemperance in the parents.

One portion of the fourth section should be devoted to the general medical history of the patient, and should include a report of any existing disease, and also the condition of the various organs and functions immediately prior to admission. At present no such information reaches the asylum, there being no place for any in the certificate, and the relieving officer or other person accompanying the patient can rarely give any reliable account.

The condition as to sleep and to the state of the bowels are rarely, if ever, alluded to; and yet disturbance of one or both, forms some of the most common and urgent symptoms for treatment immediately on arrival at the asylum, the medical officers of which have, as it were, to work in the dark.

Disturbance of the uterine functions, and, especially in the case of young females, amenorrhœa, although common symptoms in the insane, are seldom recorded in the certificates. The importance of the knowledge of the latter symptom may be demonstrated by the fact that a return of the menses is so frequently followed by recovery.

The medical practitioner should satisfy himself by personal examination as to the absence or presence of any serious injury, bruises, &c., and, if any be present, report them. In the case of those who have been very violent, bruises are often noticed, arising from the patient knocking himself about, from being held, &c.; in such the chest should always be carefully examined, and (particularly if it has any marks of injury, no matter how slight), if possible, with the stethoscope. Patients have, not unfrequently, been received at asylums with fractured ribs, which were not recorded, most probably from not having been examined for. Within my own knowledge many medical men would have saved themselves much subsequent anxiety and trouble had they adopted this course.

The fitness of the patient to be removed to an asylum should be certified by the medical man on the day of removal.

Other headings of information do not require a detailed notice, but will be found in the tabulated form appended to this paper.

The adoption of some plan such as I have imperfectly sketched would go far to remedy the present unsatisfactory certificates. It would entail extra trouble on the part of the medical man, so far as the written record was concerned. As, however, all the sections of information are only such as ought to form the subjects of investigation of every practitioner who examines an insane patient, the act of recording all the facts should be easy enough.

Before concluding I would briefly refer to one matter which has always influenced the production of imperfect and unsatisfactory certificates, and which has been powerfully alluded to in a recent work.[2] It appears altogether inexplicable why the subject of insanity has been hitherto ignored, or not been insisted upon by the various medical examining boards. Disease of the brain, as the instrument of mind, is more likely to be attended with disastrous results to the patient and his family, than disease of any other organ; none yields more readily to early and proper treatment, and yet it forms no recognised portion of the ordinary curriculum of medical studies. I am very strongly of opinion that if a knowledge of insanity were made as compulsory as that of any other disease, the early symptoms would be discovered by medical men long before the patient became, to the outside world, palpably insane, and whilst in the early stage would be treated successfully. A better knowledge of insanity among the profession at large would, I believe, ultimately result in fewer cases requiring asylum care and treatment.

[1] I drew attention to this subject in the Report of the Brookwood Asylum for the year 1870, and from which I extract the following:—"It is very evident that these particulars ought to fall to the province of the medical practitioner to answer and to embody in his certificate; and, although he may require to be assisted in this respect by the relieving officer, yet whether the entries be matters of fact or of opinion, they are essentially of a medical nature. Under the present legal form the replies to these important questions are too often erroneous, and calculated to mislead those who have the subsequent care of the case, and not unfrequently are directly opposed to the facts contained in the medical certificate." An asylum superintendent of great experience suggested to me that the present statement should be made out, and signed by the medical certifier. From the form I have appended it will be seen there are many other suggested headings additional to those now required, and which I think would better form a portion of the medical man's own certificate.

[2] "The requirement of certificates, given separately, after independent examination, by two medical men wholly unconnected, and neither having any interest in the fate of the patient, would seem a judicious precaution. .... When, however, it comes to be explained that the medical man signing the certificate may have never seen a lunatic, read a page of any work on insanity, heard a lecture on the subject, or been asked a question relating to it at any examination, the complexion of the case undergoes a change which is not reassuring. .... Not one in twenty of the average practitioners one meets is either qualified to form an opinion on a case of insanity, or justified in filling up a certificate."—Dr. Mortimer-Granville, "The Cure and Care of the Insane," vol. ii., pp. 150, 151.

Suggested Form of Medical Certificate.

1. Facts indicating insanity observed by myself on the day of examination:—
   - Appearance, especially facial aspect, attitude, peculiarities of dress.
   - Delusions. (If any, describe them.)
   - Coherency or incoherency.
   - Condition of the memory.
   - Any change in the higher emotions.
   - Condition of the habits and propensities, especially as to change.
   - General demeanour: restlessness, excitement, exaltation, or depression.
   - Other abnormalities.
2. Facts indicating insanity observed by myself on days other than that of the certified day of examination.
3. Other facts (if any) indicating insanity communicated to me by others.
4. Statement of other particulars not contained in the foregoing:—
   - Probable duration of insanity.
   - Supposed cause—exciting, predisposing.
   - Is the patient temperate or intemperate?
   - Any relative known to have had insanity, epilepsy, paralysis, any nervous diseases, chorea. Give details, and state relationship.
   - Any defect at birth or in early infancy.
   - Any severe infantile diseases, convulsions during teething, tapeworm, &c.
   - Whether subject to epilepsy; state frequency and character of attacks.
   - Whether dangerous to others; state how, and whether exhibited towards a particular individual.
   - Whether dangerous to self—from non-suicidal motives, or from suicidal motives. Describe any attempt.
   - If of mischievous, destructive, uncleanly, or objectionable habits of any kind.
   - Condition as to sleep.
   - State of the bowels.
   - If known to have had any disease of the brain or spinal cord, sunstroke, or injury to head.
   - Any existing or recent bodily illness. Give details.
   - Present condition of thoracic and abdominal organs.
   - Any recent injuries, or marks of any. State how received, and give description.
   - If a female, report the condition of the uterine functions. Any special diseases or disorders connected with the puerperal condition. The number of children, and age of the youngest.
   - Fitness for removal to asylum (to be certified on the day of removal).

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

(Continued from p. 486.)

HORSE-POX.

I HAVE casually and repeatedly alluded to horse-pox, and it is necessary to again refer to it; as if what transpired at the Vaccination Conference is to be taken as evidence of our state of knowledge with regard to this kind of variola, we would deserve to be accused of unpardonable ignorance. If for no other object also than to rescue the reputation of Jenner from the charge of error preferred against him in this matter, it would be more than worthy of our attention. It is well known that Jenner expressed himself as of opinion that cow-pox was derived from horses affected with what was then, and is even now, popularly termed "grease." But for very many years, and also at the recent Conference, it has been denied that there was any relationship between the disease of the horse and cow-pox; and on the latter occasion it is reported that one of the speakers, in remarking that "all who were acquainted with the subject were well aware that there were some erroneous views originally held by Jenner with respect to the conveyance of that particular disease (cow-pox) from one animal to another—from the horse to the cow, and that it was in consequence of that conveyance that the cow became affected with a disease that he called cow-pox," added: "In the present day, perhaps, it was unnecessary for him to say that among veterinary surgeons who were acquainted with the lower animals, that opinion had always been negatived. He was of opinion that Jenner saw the disease of the animal, and that it was of a repetitive nature, which by his own observations he was well aware did not possess any particular quality." It is scarcely necessary to remark that intelligent students of veterinary medicine do not negative Jenner's opinion, but know for a well-established fact that he was justified in that opinion; inasmuch as horses suffer from a malady closely resembling the so-called "grease" (which is simply a kind of catarrhal inflammation of the sebaceous follicles of the skin at the lower part of the limbs), and that this malady is transmissible to the cow and to mankind, producing a train of symptoms so exactly like vaccinia that no material difference can be discerned between the two maladies.

Jenner was too serious a philosopher and exact observer to make light assertions or superficial examinations, and he only erred when he stated that the one source of cow-pox, and even of small-pox, was to be found in the horse. He was absolutely correct as to a particular cutaneous disease of the horses' limbs being transferred, by means of human hands, to the cow's udder, and there producing cow-pox, which again could be communicated to people and protect them from small-pox. The facts, accidental and experimental, upon which he bases his assertion are unmistakable and indisputable, and the "sore heels" or "grease" he describes as affecting horses and infecting the farriers who shod, or the grooms who attended to them, was nothing more or less than "equine variola" or "horse-pox," a disease which appears to have been far more frequent then than now, probably owing to the insanitary condition in which horses were kept in those days. Reference to his work[1] will show that Jenner knew more of the variolous diseases of animals than many more recent authorities, and that this "sore heel" disorder, or "grease," was eruptive in character, and could produce cow-pox. Jenner's discovery—for discovery this really was—was confirmed by Dr. Loy, of Pickering, who, in a little pamphlet which appears to be now quite unknown,[2] is much more explicit than Jenner with regard to the nature of this inoculable "grease," and he resorted to direct experimentation to prove the relations between it and cow-pox. His earlier experiments failed, in consequence of his not being able to distinguish between the ordinary and the specific malady. At last, he states, he had the good fortune to find a horse on whose heels the matter was much more limpid than in all the preceding ones—on the fourteenth day of the disease, the seventh of the discharge from the heels. Four cows inoculated with this matter showed the usual symptoms of cow-pox, and a child also inoculated with it on the arm on the third day had a papule surrounded by slight inflammation; on the fourth day the papule was very elevated, and on the fifth day there was a purple-tinted vesicle; on the sixth and seventh days the vesicle had increased and was darker. At the same time there was fever, headache, quickened respiration, frequent pulse, white tongue, &c., which symptoms declined towards the ninth day. On the sixteenth day after inoculation from the horse, the child was inoculated with small-pox matter without result. Loy alludes also to a farrier and a butcher of Pickering, who, in applying dressings to the heels of a horse affected with "grease" became inoculated. Desirous of ascertaining whether the pustules which were on the hands and forehead of the butcher could communicate the disease by inoculation, he inserted some of the matter from one of them into the arm of his brother, who had never had small-pox. The result was exactly the same as inoculating with cow-pox virus. Loy recognised two kinds of "grease"—one merely local and non-infective, the other local and constitutional (eruptive), which gives the disease to those who groom or handle the affected horses. With the first kind there was no general disturbance, but with the second at the commencement the horses exhibited symptoms of fever, "from which they were relieved as soon as the disease appeared at

[1] An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, a Disease discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the name of Cow-pox. London, 1798.

[2] Account of some Experiments on the Origin of the Cow-pox. 1802.

the heels, and there was an eruption on the skin. The horse, the matter from which communicated the disease by inoculation, was very unwell until the appearance of sore heels, which was, as in all the other cases, accompanied by an eruption over the greater part of the body." The fact that inoculation from the "constitutional grease" was a protection from small-pox, and that the rather severe effects of direct transmission from the horse to the human species were modified by passing the virus through the cow, or through mankind, was fully recognised by this enlightened observer; as well as the other important fact, that the matter was only certainly effective when perfectly limpid, which was in an early stage of the disease. Loy likewise remarked that neither the original nor the communicated disease was infectious through the medium of the atmosphere.

The observations of this contemporary of the illustrious Jenner are extremely interesting, while they are decisive as to the intimate relationship existing between horse-pox and cow-pox. Though his pamphlet consists of only a few pages, it contains facts of great moment with regard to our subject, and there is perhaps nothing more astonishing in the whole range of medical literature, and especially that of vaccination, than the oblivion into which the record of his observations immediately fell. The opinion so strongly expressed by Jenner, based as it was on well-observed facts, and the convincing demonstrations (clinical and experimental) of Dr. Loy, do not appear to have availed much in establishing the existence of such a malady as horse-pox. Very long ago a few experimenters, medical and veterinary (among the latter of whom was Coleman)—in order, I suppose, to test the correctness of Jenner's view—attempted to transmit the "sore heels" or "grease" to horses and cattle, but failed, as Woodville and Simmons (mentioned by Loy) had previously done, and for the same reason—they inoculated from the local non-constitutional malady, overlooking the distinction which had been so well drawn by the Pickering physician with regard to the simple cutaneous disorder and the specific eruptive one. Consequently, Jenner was set down as having made a mistake; the existence of horse-pox was denied, and even at the recent Vaccination Conference the same speaker who asserted that veterinary surgeons had always negatived Jenner's opinion, said that Jenner saw the disease of the animal ("grease"), "and that it was of a repetitive nature [*sic*], which, by his own observations, he was well aware, did not possess any particular quality. ..... With the exception of the sheep, he knew of no other animal that was affected with variola. There was an equine variola which was produced from the cow (!), but he had never seen variola in the horse. He knew it had been stated of late that cases of that disease had occurred in France, but all he said was that our observations had been extensive and minute, and they had seen nothing approaching to it in a horse or dog, or any other animal except the sheep." Five years before these words were spoken, the horse-pox had been carefully described in English veterinary literature, and the malady had not only been observed on the Continent, but in England and America, and its existence proved over and over again beyond a doubt.

Dr. Loy's pamphlet was translated into French by Dr. Carro, soon after its appearance in England, and published in the *Bibliothèque Britannique* in the year X. (vol. xxi.) Carro was a great admirer of Jenner, and he dwelt with much force on the clearness and precision of Loy's experiments, as furnishing indubitable proof of the justness of the opinion of the introducer of vaccination. But Carro, in his eulogistic comments on Loy's work, remarks that the French vaccinators had experienced great difficulty in understanding what the English term "grease" really meant, some thinking it was *javart* (fistula of the foot from injury), or *eaux aux jambes* (simple inflammation of the sebaceous follicles—*vulgo*, common "grease")—"an uncertainty," adds Carro, "which shows how little care the English have observed in describing the *grease*, and is probably the cause of the small progress this interesting portion of the veterinary art has made among them." The French veterinarians and medical men who tried Loy's experiments had no better success than those in England who did not have recourse to the eruptive disease for inoculating material; consequently, in France, also, Jenner and Loy were believed to be in error, and nothing more was thought of horse-pox or "constitutional grease."

But it is curious, in the midst of this incredulity, to find Carro himself adducing most valuable confirmatory proof of the correctness of Jenner and Loy's statements, in a letter addressed to Professor Pictet, of Geneva, in 1803, and published also in the *Bibliothèque Britannique*. In this letter Carro writes:—"Les maréchaux-ferrants de Salonique distinguent trois sortes de javart: *l'écouelleux, le phlegmoneux, le variolique*. Ce dernier paraît être le même que le *grease* constitutionnel du docteur Loy, car il est accompagné d'une éruption semblable à la petite vérole. Aussi, d'après le rapport des bergers Albanais, les vaches sont elles sujettes dans ce pays à une maladie qui paraît avoir une grande ressemblance avec le cow-pox des Anglais; et ce que décide la question, c'est que le docteur Lafont, établi depuis longtemps à Salonique, en Macédoine, a réussi à produire la véritable vaccine sur deux enfants inoculés avec le virus pris sur les jambes d'un cheval atteint de cette troisième espèce de javart, quoiqu'il ne produisît aucun effet sur une vache soumise aussi à cette inoculation; et cette vaccine s'est propagée de ces enfants à d'autres par l'inoculation, avec ses caractères et sa bénignité ordinaires."

In every country to which Jenner's views had penetrated, the same uncertainty prevailed with regard to the nature of the disease termed "grease" or "sore heels;" and therefore disappointment followed attempts to transmit it to the cow, and so to produce cow-pox.[2] In Italy, for instance, the term was translated into *giardone*, pedal fistula; and the possibility of producing such a disease as cow-pox from this condition placed the reputation of Jenner very much at the mercy of captious critics. In 1840 Dard saw the disease among horses in France, and called it *rhinite pemphigoïde*; in 1843 it was again observed in that country by Bouley, now director of the French Veterinary Schools, who designated it *herpes phlyctenoïde*, to distinguish it from glanders and farcy, which it somewhat resembles. But it was not until 1860 that the discovery of Jenner and the researches of Loy received further confirmation, and scientific attention was seriously directed to it. In the spring of that year the horses in the commune of Rieumes, not far from Toulouse, were attacked with a disease which assumed an epizoötic form, and in less than three weeks more than a hundred had become affected. M. Sarrans, the district veterinary surgeon, reported the disease as commencing with slight fever, soon followed by local symptoms, the chief of which were hot and painful swelling of the hocks, with an eruption of small pustules on the surface of the tumefied parts. In three to five days a purulent kind of discharge took place in the pastern, which continued for eight to ten days, during which the inflammatory phenomena gradually subsided; then the pustules desiccated, and towards the fifteenth day the crusts began to fall off, carrying the tufts of hair with them, and leaving more or less perceptible cicatrices. The eruption appeared not only on the limbs, but on other parts of the body, particularly on the nostrils, lips, flanks, and vulva. There was no cow-pox present in the locality, and the extension of the disease seemed to be due entirely to contagion. No fewer than eighty mares were infected from being sent to the Government stallions at Rieumes, the ropes with which their hind limbs were secured (passing round the pastern) being impregnated with the discharge from the heels of some diseased mare. Only three mares and two stallions escaped attack. One of the animals exposed to infection chanced to be sent to Toulouse, and not appearing so well as usual it was left at the Government Veterinary School. It was not until it had been there for eight days that Professor Lafosse observed the mare to be dull, suffering from inappetance, and lameness in both hind limbs, with difficulty in flexing the fetlocks, and a hot, painful swelling confined to the left fetlock, extending higher on the right leg. On these swollen parts small tufts of hair were erect here and there, and at these places there were what appeared to be pustules, from which exuded a fluid matter possessed of an ammoniacal odour, but less fetid than that of stearrhœa ("grease"). Lafosse thought at first that it was only the latter disease in an acute form; and he was happily inspired to inoculate a cow, in order, once more, to submit the Jennerian doctrine to an experimental test. The experiment was made eight days after the manifestation of the eruption on the mare, and was perfectly successful. Papules, then pustules, formed on the cow wherever the matter obtained from the mare had been inserted with the lancet—large, flat, firm, and round pustules, with a central umbilicus, which caused the borders

[2] In the nomenclature of disease drawn up by a joint committee of the Royal College of Physicians, and published in 1869, I find "grease" named *Equinia sordis*, and defined as "a pustular eruption produced by the contagion of matter from a horse affected with the grease."

to appear raised—they were the vaccine vesicles, in fact. Another cow was inoculated from this one, and had a very fine cow-pock, from which a child and a horse were vaccinated, and these had a magnificent vaccinal eruption. A second child, inoculated with the matter from this horse, had, in its turn, a well-developed pock. Comparative inoculations were then made on children and horses with the equine virus and the ordinary humanised vaccine, and it was found that the former produced larger and finer pustules than the latter, though their evolution was slower. Lafosse designated the disease the *maladie pustuleuse vaccinogène* of the horse.

Bouley, then professor of clinic at the Alfort Veterinary School, not quite satisfied with what had been done in this direction by Lafosse and others, resolved to inoculate the cow with all the eruptive maladies of the horse which his daily routine of professional duty brought before him; and singular to relate, the very first case (1863) was a successful one, and produced a beautiful cow-pox. The horse presented the following symptoms:—On the inner surface of the lips, on the inferior aspect and free portion of the tongue, on the buccal and gingival membrane, and on the floor of the mouth—particularly along the Whartonian ducts,—were infinite multitudes of small vesicles about the size of a pea, some circular, others elongated, and whose opaline tint was in marked contrast to the bright-red mucous membrane on which they were seated. These pearl-tinted vesicles were smooth on their surface, had no depression, and felt rather tense; pain was evinced when they were pressed upon. In some places they were confluent, in others discrete. When they had been ruptured, there were small, lenticular, very red sores, with sharply-defined borders. A very abundant saliva, rendered frothy by the incessant movement of the tongue, filled the mouth, and escaped in long masses from its commissures. With the exception of not eating so well as usual, the horse appeared in good health. The symptoms were so different from those described by Loy and Lafosse, that Bouley thought it was an aphthous stomatitis, and that therefore, like the foot-and-mouth disease of bovines, it must be contagious. True to his resolve, he inoculated a cow to see what the result would be, and produced veritable cow-pox, from which children were most successfully vaccinated. For some months other horses were admitted to the clinic of the school suffering from the same disease, which varied in its symptoms only with regard to the seat of eruption, which was in some instances as in the first case, and in others as in Jenner's, Loy's, and Lafosse's cases. From these multiplied observations and experiments, most carefully watched and discussed by the most eminent medical and veterinary authorities in Paris, there could no longer exist the shadow of a doubt as to the nature of the disease, which was accordingly designated "equine variola" by Depaul and "horse-pox" by Bouley himself. Bouley confesses that for years he had met with the disease among horses from time to time, but until Lafosse's experiments at Toulouse he had not suspected its variolous nature.

So long ago as 1853 I witnessed, in Manchester, a case of inoculation of a farrier who had shod a horse affected with "grease." The vesicle was situated on the chin, and there was great constitutional disturbance. From time to time outbreaks of the disease have been recorded in France, where it appears to be most prevalent in Paris and its neighbourhood. In *Veterinary Sanitary Science and Police* I have devoted a chapter to it, and in the periodical edited by me, the *Veterinary Journal*, I have alluded to it frequently (particularly in vol. v., p. 81; vol. vii., p. 371; vol. ix., p. 204). A translation is also given of an interesting report by Professor Ellenberger of the Berlin Veterinary School of an outbreak of what he describes as "stomatitis pustulosa contagiosa," but which was really horse-pox. In this respect the ready communicability of the disease and its vaccinogenous character is well shown. In a recent number of the *Deutsche Zeitschrift für Thiermedicin* Professor Friedberger of the Munich Veterinary School furnishes an excellent account of an outbreak in that city, and a record of successful experiments. In German and Italian veterinary literature similar outbreaks are described. For the past two or three years there has prevailed widely among horses in England, Ireland, and Scotland a pustular exanthem, very contagious in its character, and known among grooms and others as the "boil disease," the "American boil disorder," &c., which, in some of its features, if not in all, somewhat resembles horse-pox. The eruption in the majority of cases is mainly confined to the trunk. From England it has been carried to Belgium, where it has attacked a large number of horses. Horse-pox has prevailed as an epizoöty for two years, and is now prevalent, at Montreal. Many persons have been accidentally inoculated, and the vacciniferous character of the disorder has been established by medical and veterinary authorities. The outbreak is described in the *Veterinary Journal* for August, 1877. Last October, immediately before leaving my late regiment, the Second Life Guards, I had four cases of the disease among young horses just joined, and my farrier-major was accidentally inoculated on the finger. Surgeon Hensman of the regiment considered the case one of severe vaccination. The details are recorded in the *Veterinary Journal* for March, 1880.

So that since 1864, when the nature of horse-pox was for ever settled by the observations and experiments of Bouley, and the discussions that ensued thereon at the Paris Academy of Medicine, the history of the malady has been largely supplemented by contributions from observers and experimenters in Europe and America, and Jenner's statement has been admitted by all who have studied the subject to be true except in one particular—the "horse-pox" or "constitutional grease" being the source of cow-pox. In this only was Jenner in error. The two diseases are perfectly independent of each other. Cow-pox appears where there are no horses, or possible contact with horses, and where the men who attend upon these do not milk cows. It has frequently been observed that horse-pox prevails on a farm or in a locality, and no cow-pox is seen there; while the last-named disease may affect a number of cows in a dairy, and the horses be entirely free from horse-pox. In none of the recorded outbreaks of horse-pox has anything ever been said as to the existence of cow-pox, and no attempt has ever been made to establish a relationship between the former and human variola, from which it differs as widely as the latter does from cow-pox. Horse-pox prevails entirely independently of small-pox or cow-pox. In some countries it is often present as an epizoöty—as in Lower Canada; while in other regions, where it is enzoötic, it will be more common in one part than another—as at Paris, where it is well known, and at Lyons, where, according to Chauveau, it is not seen.

(*To be continued.*)

ON LITHOTRITY:

WITH A STATISTICAL TABLE OF THE OPERATIONS FOR STONE IN THE BLADDER PERFORMED IN THE HOSPITALS OF GLASGOW.[1]

BY GEORGE BUCHANAN,
PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF GLASGOW.

THE following *résumé*, though stated in a very few figures, represents an amount of labour which I had no idea of when I began, and which I could not have accomplished without the kind assistance of the house-surgeons in the Royal and Western Infirmaries, and particularly of Drs. M'Lachlan and Harkness.

The figures till 1859 are copied from a paper which I laboriously compiled, and published in the *Glasgow Medical Journal* for April, 1859.

From that date till 1870 the figures are taken from the printed annual reports of the Glasgow Royal Infirmary, the tables of which contain the numbers, sexes, and results, but not the ages. The ward journals and operation books during the period referred to are most imperfect; many have been lost; in others, cases are omitted or not completed.

From 1870 to 1880 I have been able to make an accurate table. I first got all the cases collected from the hospital records, and submitted them to the surgeons themselves (except one who died in 1875), so that we have a clear starting-point for future statistics from Jan. 1st, 1870.

From the opening of the Royal Infirmary in 1795 till 1859 accurate records have been found of 159 cases of lithotomy in the male, with 23 deaths, or 1 in about 7 operations. Of these, 95 were under fifteen years of age, with 6 deaths, or 1 in 15⅞ operations. There were 64 above fifteen years of age; of these 13 died, or about 1 in 5 operations.

From 1859 till Jan. 1st, 1870, there were 84 cases of litho-

[1] Sequel to page 558. The information contained in Prof. Buchanan's present little article was embodied in the proof of the last part of his former paper; but the proof was received too late. Hence the necessity of this addendum.

tomy in the male, but the ages cannot be accurately ascertained; of these 6 died, or 1 in every 10½ operations.

From Jan. 1st, 1870, till Jan. 1st, 1880, the records of the two hospitals of Glasgow contain 95 cases of lithotomy in the male; of these 15 died—a mortality of 1 in every 6⅓ operations. Of these, 33 were under fifteen years of age, with 2 deaths; while 62 were over fifteen years of age, with 13 deaths.

The total number of lithotomies in the male, without reference to age, in hospital practice in Glasgow, is 338, with 46 deaths, or 1 death in 7⅓ operations.

Lithotrity.—The total number of cases of lithotrity in the male performed in the hospitals is so small, and the particulars up to 1875 have been so carelessly recorded, that it is unnecessary to give the meagre information which the records afford.

CASES OF NEURALGIA TREATED WITH TONGA.

BY W. J. H. LUSH, M.D., F.R.C.P.ED., M.R.C.S.E., &c.

CASE 1.—W. H——, aged thirty-one, had been suffering from most severe neuralgia in the right superior maxillary division of the fifth pair of nerves for nearly ten days, the neuralgic pains darting over the lower eyelid, the cheek, the upper lip, and side of the nose, the paroxysms, lasting from ten minutes to half an hour, occurring six or eight times in the twenty-four hours. The teeth in both the upper and lower jaw were in a very decayed condition. One teaspoonful of the alcoholic extract of tonga (prepared by Messrs. Allen and Hanburys, 37, Lombard-street, E.C.) was ordered to be taken in half a wineglass of water every six hours till the pain was relieved. The paroxysms entirely ceased after the *fourth* dose.

CASE 2.—Mary B——, aged fifty-four, suffering from severe sciatica, was ordered a wineglass of the infusion of tonga (from the bag) every six hours. After taking the infusion for four days it was discontinued, as no benefit was derived.

CASE 3.—A woman, aged twenty-nine, in a very weak, anæmic state, with inflamed axillary glands, had suffered from supra-orbital neuralgia for six or seven days. Was ordered a wineglass of the infusion (from the bag) every six hours. The pains lessened in severity after the eighth dose. She was then placed on a liberal diet, and a tonic of the iodide of iron ordered. The pains, however, returning in great severity, she was ordered one teaspoonful of the alcoholic extract three times a day. The paroxysms ceased and did not return after the fifth dose had been taken.

CASE 4.—A young woman, aged nineteen, had severe neuralgia of the right inferior dental nerve. Her teeth were very much decayed, and several stumps were extracted. She was ordered a wineglass of the infusion (from the bag) every six hours. The pain still continued after taking it for three days, although in a less severe degree. I did not see her again after the third day.

CASE 5.—Wm. P——, aged thirty-two, had suffered greatly from neuralgia for nearly two years. He considered the original cause of the attacks to be a blow received about that time. The paroxysms, which occurred periodically about every month or six weeks, varied in severity and duration, and were for the most part confined to the inferior dental nerve on the left side, although occasionally the right was also the seat of pain. The patient had been under my notice for nearly a year and a half, and during that time attacks incapacitating him from following his occupation were of frequent occurrence. Sulphate of quinine alone, and in combination with bromide of potash and chloral hydrate, as a rule, relieved the patient in three or four days. He was ordered one teaspoonful of the alcoholic extract in water three times a day. The pain very much decreased after the fourth dose, and entirely ceased after the sixth dose of the extract had been taken. In my case-book I find the following note on April 15th on this case:—"Had another bad attack, though less severe than the last. The neuralgic pain entirely disappeared after the third dose." This patient complained of dryness of the mouth and fauces after each dose of the extract had been taken, the dryness continuing for nearly an hour, and the return of saliva being characterised by a "pricking" sensation along the gums.

These five cases have been taken as they came under notice in the ordinary course of my practice, and, being few in number, may not be considered of much value as a proof of the efficacy of tonga as a remedy for neuralgia; but, as with every new remedial agent, it is only by the unbiased report of a large number of unselected cases that a correct estimate of the value of tonga in the treatment of neuralgia and allied nervous affections can be obtained. As in the cases reported in THE LANCET, March 6th, by Drs. Ringer and Murrell, no toxic symptoms were produced by the administration of the drug in any of these cases except the fifth, in which case each dose was undoubtedly followed by a decrease in the amount of saliva.

Fyfield, Hants.

SEVERE INJURY TO FOOT; ANTISEPTIC TREATMENT; RAPID HEALING.

BY ANDREW LANG BROWNE, M.D.,
SURGEON, ARMY MEDICAL DEPARTMENT.

SAPPER M——, Royal Engineers, aged twenty-seven years, a strong, healthy man, was brought to the Cambridge Hospital, Aldershot, on the afternoon of the 23rd March last, suffering from a severe injury of the left foot. On admission he stated that, while engaged in removing a stove from one of the huts in camp, a piece of the iron piping which formed its chimney dropped from the roof on to his foot. On examination it was found that the edge of the pipe had cut right through his strong ammunition boot and sock deeply into the foot, almost dividing the outer side of the foot, together with the four smaller toes, from the rest of the limb. The wound was more or less curved, and extended across the foot from about the middle of its outer side to the metatarso-phalangeal joint of the second toe. I passed my finger into it, and found the metatarsal bones of the fifth, fourth, and third toes smashed through, the head of the second metatarsal bone crushed and splintered, and also dislocated from its phalanx.

Treatment.—The wound was simply washed out thoroughly with carbolic lotion (one to forty), the bones placed in position, and the edges of the wound drawn together by four silver sutures. A piece of lint moistened with carbolic lotion was then laid over it, and the foot and ankle completely enveloped in a piece of gutta-percha tissue, and the limb placed on a splint. I dressed the wound morning and evening with carbolic lotion and lint. On the fifteenth day after admission the sutures were removed, and by the twenty-first day the wound had quite healed, and the patient was allowed up.

Remarks.—This case is remarkable, not only as regards the rapidity with which the wound healed (twenty-one days), and the complete union which took place after so severe an injury of bone and tissue, but also on account of the entire absence of pus, the dressings at no time being soiled by any.

Cambridge Hospital, Aldershot.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla enim est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

OPERATION FOR UNUNITED FRACTURE OF THE OLECRANON BY OPENING THE JOINT, AND WIRING THE FRAGMENT TO THE ULNA; BONY UNION.

(Under the care of Mr. WILLIAM ROSE.)

FOR the following notes we are indebted to Mr. John Phillips, house-surgeon.

W. M——, aged twenty, was admitted into the Fisk ward on March 31st. Early in January he fell down on to his left elbow. Great swelling followed, and he was treated

by his medical attendant for a simple sprain. He noticed, however, that as the pain and swelling subsided he could not extend the forearm. In the beginning of March he attended King's College Hospital as an out-patient under Mr. Rose. A fracture of the left olecranon was detected with about half an inch separation between the broken surfaces. The forearm was extended and bandaged upon a splint in order to relax the triceps, so as to bring the olecranon down into position. As this was followed by no marked improvement, Mr. Rose operated on April 3rd.

A longitudinal incision three inches in length was made over the seat of fracture, and the joint opened. The olecranon was freed with a few touches of the knife from its lateral attachments, and drawn down to the ulna without difficulty. The fibrous tissue which had formed between the broken surfaces was carefully dissected away, and the opposing surfaces of bone were scraped with a chisel till they were quite bare. A hole was then drilled obliquely in the ulna, and another exactly corresponding to it was made in the olecranon, care being taken to bring out the point of the awl on the rough surfaces just outside the articular cartilage. A strong silver wire loop was then passed through the holes thus made, and drawn tight. The broken fragments were thereby brought closely and firmly together and the wire was entirely outside the joint. Horsehair drainage was used, and the wound was closed with carbolised silk sutures. Gauze dressings were applied, and the limb was put up on a splint with the forearm extended. Strict antiseptic precautions were observed throughout.

The after-progress of the case was highly satisfactory. The joint remained perfectly quiet, the patient complained of no pain, and the temperature never rose above 99·4°, nor his pulse above 84.

The antiseptic dressings were changed only seven times in the five weeks which elapsed before the silver wire was removed. The joint was moved on the tenth day, and on the seventeenth day from the operation the patient was able to extend the forearm. After this the action of the triceps steadily improved, and the patient left the hospital on May 13th with evidently firm bony union.

Mr. Rose remarked that he was led to undertake this operation of opening the joint and wiring the fragment, not because the fracture was ununited, but because the arm had lost all power of extension in consequence of the complete laceration and displacements of the lower attachments of the triceps muscle. He would not recommend the operation in every case of fracture of the olecranon. It was not an uncommon occurrence to find a considerable amount of extension in such cases. This was to be explained by assuming that, though the olecranon had been detached, the fibrous insertion of the triceps had not been entirely severed.

NEWARK HOSPITAL.

CHRONIC VESICAL CATARRH; GONORRHŒA; ACUTE CYSTITIS; SURGICAL KIDNEY.

(Under the care of Mr. JOB.)

FOR the following notes we are indebted to Mr. Reckitt, house-surgeon.

William P——, aged fifty-nine, a labourer and widower, was admitted on Oct. 3rd, 1878. He stated that his father died of gravel, and that one son was troubled with the same complaint. He stated that with the exception of being troubled slightly for thirty years with "gravel," he had enjoyed very fair health, had had occasional difficulty in micturition during this period, but never complete retention. Ten years ago he passed per urethram a small white calculus, the size of a pea, and his urine had frequently deposited a whitish sediment. For several years there had been frequent desire to micturate. He was not a very sober man.

A month before admission he contracted a gonorrhœa, for which he was treated as an out-patient with alkalies and sulphate of magnesia. No injections were used. The discharge stopped in a few days, but there remained considerable pain in the perineum and over the pubes, the desire to micturate becoming more and more frequent, and the deposit in the urine so abundant and viscid that there was often extreme difficulty in voiding it. For three nights he had passed a large quantity of bloody urine, with a thick and sticky muco-purulent deposit, and one evening he expelled from the urethra a small phosphatic calculus the size of a pea.

On admission he was considerably emaciated, with an anxious, nipped, and painful expression of countenance. His tongue was very red and glazed, and he complained of aching pains in the abdomen and loins, and in the supra-pubic region, with frequent desire to micturate. Suspecting a stone in the bladder, Mr. Reckitt tried to pass a No. 8 silver catheter, but the pain and spasm were so great that he desisted. The surface of the body was cold on admission. Temperature 97·4°; pulse rather feeble and 90. The urine was very ammoniacal, with a strongly alkaline reaction, and contained a large amount of viscid muco-purulent matter, and microscopically triple phosphates of a beautiful character, and squamous epithelium were found. To have milk and beef-tea, warm bath, half an ounce of brandy every two hours, and hot bottle to feet during the day and night; and nitro-hydrochloric acid, tincture of hyoscyamus, and infusion of buchu, every four hours. Evening temperature, 99·6°.

On Oct. 6th, suspecting a stone, Mr. Job passed a sound, the patient being under chloroform, but with a negative result. The bladder was washed out with a solution of nitric acid (1 to 100), and a morphia suppository was introduced. He had a better night. Next morning the urine dribbled away, and only two ounces were passed voluntarily. A No. 10 silver catheter was passed, but no urine escaped. Slight twitching set in in the afternoon. The patient gradually became comatose, and died at 3.40 P.M. Free vomiting had taken place in the morning.

Autopsy.—Fundus of bladder considerably hypertrophied; interior sacculated; mucous membrane ulcerated in various places, forming "bridges of veins"; a considerable quantity of muco-purulent matter present; prostate gland much enlarged, and at one side of the prostatic portion of urethra was lodged a small, and apparently very old, phosphatic calculus. The left kidney was very much atrophied, and no larger than a crow's egg. The right kidney was twice its normal size; the capsule was readily detached. The pelvis was much dilated, and contained a very small phosphatic calculus and about two ounces of pus. Ureter dilated on this side. Other organs healthy.

Remarks.—Although vesical catarrh had probably existed for many years, as evidenced by the history, yet the attack of gonorrhœa was undoubtedly the main factor in producing an acute cystitis, with extension of the inflammatory action to the right kidney, resulting in suppuration of that organ, and consequently almost complete suppression of urine, the left kidney being apparently useless and the other disorganised, as the post-mortem showed; hence the convulsive twitching, vomiting, and ultimate coma.

HITCHIN INFIRMARY.

NECROSIS; PYÆMIA; AMPUTATION; ALBUMINURIA; RECOVERY.

(Under the care of Mr. C. J. GRELLET.)

FOR the following notes we are indebted to Mr. Mason.

Walter W——, aged sixteen, of Stotfold, Beds, was admitted into this infirmary on Aug. 26th, 1879, in a very low prostrate condition. Previous to his admission he had been confined to his bed for a fortnight with a supposed rheumatic attack, for which he was seen at his own home by Mr. Grellet on Aug. 24th, who found him suffering from a diffuse abscess extending from the inner ankle half way up the right leg. Removal to the infirmary was advised and adopted.

On admission it was found that during the journey the abscess had broken, and about one pint of bloody matter had escaped. The lad was put at once to bed, and on further examination extensive necrosis of tibia, fibula, and astragalus was discovered. The cavity was washed out with carbolic lotion, and a drainage tube was inserted. Ordered beef-tea two pints, milk diet, wine eight ounces, and to take every four hours two grains of the sulphate of quinine with fifteen drops of the solution of perchloride of iron in water. On Aug. 30th he was put upon meat diet.

His health steadily improved up to Oct. 19th, when in the afternoon of that day he complained of great pain in the stomach, and had a slight rigor. He confessed that he had eaten two hard pears. Linseed-meal poultices were applied to the abdomen, and some warm carminative medicines were

administered, from which he obtained relief. On Oct. 22nd, however, his appetite failed and diarrhœa set in, rigors supervened, and another collection of pus formed over the tibia above the original one.

After consultation, amputation was performed by Mr. Grellet at the middle third of the thigh on Oct. 24th, 1879. Very little blood was lost during operation, but the patient was very weak after it, and remained on the table for an hour and a half. He was then put to bed and given an opium draught. He was very restless during the night.

From Oct. 25th to the 29th the stump did well, and the patient was better and took nourishment well; but on the 29th there was effusion into the left knee and ankle joints, which were wrapped in cotton-wool. On Nov. 1st the stump was healthy, the joints were better, but the scrotum was œdematous. The urine was albuminous (about one-sixth). Next day the scrotum was larger, hot, red, and painful, and the boy had diarrhœa. Kino and bark mixture was given night and morning, and linseed-meal poultices were applied to the scrotum. On the 4th the stump was healthy-looking, though the granulations were indolent; the scrotum was less painful. On the 5th the scrotum was smaller and less painful, but sloughing; diarrhœa persisted; the albumen in the urine was less. The patient was slightly improved on the whole. On the 6th, in addition to the quinine-and-iron mixture, carbolic-acid capsules (one minim) were given thrice daily. On Dec. 1st the stump was healed and quite sound, the scrotum was better, and the urine was less albuminous than at first. The diarrhœa was restrained by liquid extract of bael and compound tincture of chinchona in decoction of logwood. On the 9th the scrotum was healed, and the urine was slightly albuminous. The patient got up for the first time since his admission. Diarrhœa ceased on the 20th; and on the 23rd the urine was free from albumen.

On Feb. 12th, 1880, the patient was discharged cured.

STRATFORD-ON-AVON INFIRMARY.

GUNSHOT WOUND OF LEFT KNEE-JOINT, WITH LONGITUDINAL AND TRANSVERSE FRACTURE OF FEMUR; AMPUTATION.

(Under the care of Mr. LUPTON.)

THOMAS R. B——, aged twenty-four, theological student, was admitted on Feb. 12th with a gunshot wound of the left leg and knee. In company with a friend he was shooting rabbits, when a hitch occurred with the ferrets, and the friend stooping down to set the hitch straight, dropped his gun from the point of his shoulder, which exploded as it fell, and shot the patient. Three-quarters of an hour elapsed between the receipt of the injury and the patient's arrival at the infirmary, during the whole of this time he was bleeding freely.

On admission he was blanched and faint, and was not in a favourable state to bear either chloroform or the shock of a severe operation. The knee-joint was fairly "blown open" by the discharge, and about a couple of inches of the top of the tibia carried away by it; the patella with its ligament, the crucial ligaments, the articular cartilage of the head of tibia, and the semilunar cartilages were all blown away; the femur was split longitudinally from the joint about two inches upwards; and at a point about two inches and a half above the termination of the longitudinal fracture it was fractured transversely. The popliteal artery and the head of the fibula had escaped injury.

Under the circumstances amputation was urgent, and was done forthwith, the femur being sawn through just above its transverse fracture. Only two vessels required ligature.

On the following day hæmorrhage occurred, and it was necessary to reopen the stump and secure a vessel which had escaped observation at the time of the operation. Eight days after this the patient struck the end of his stump, and bleeding again occurred, which became so severe that it again became necessary to open the flaps to secure the bleeding point.

It is worthy of remark that on this occasion, the emergency being sudden, and proper assistance not being at hand, the patient *himself* assisted the nurse to steady the stump, while Mr. Lupton broke down the union of the flaps, and searched for and tied the bleeding point.

As the bone was unduly prominent on the face of the stump, Mr. Lupton very reluctantly judged it better to remove another inch of bone with a frame-saw, the patient meanwhile calmly steadying the stump.

The ligature on the femoral artery came away on the 15th day, and the patient left the infirmary ten weeks after the operation with a sound stump.

The case remained under observation, and some three weeks after leaving the hospital there was evidence of pus forming under the fascia lata; this ultimately made its way out at about the centre of the cicatrix. Discharge from this point continued, and at the end of July it became evident that a portion of the femur had separated; this was shortly after divided with a pair of bone nippers, and the two portions twisted out of the orifice. The case did well afterwards.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Section of Femur above Trochanter for Angular Anchylosis of Hip.—Salicin and Salicylate of Soda in Acute Rheumatism.

THE ordinary meeting of this Society was held on the 14th inst., the President, Dr. Greenhow, F.R.S., in the chair. In spite of the small attendance, a well-sustained debate arose upon the subject of the treatment of acute rheumatism by salicin and salicylate of soda, introduced in two exhaustive papers by the President, summarising his own experience, which was somewhat adverse to these drugs. Drs. H. Weber, Silver, Sanderson, Cavafy, and others, took part in the debate.

Dr. STEPHEN MACKENZIE exhibited a case of Anterior and Posterior Poliomyelitis following Small-pox. The patient was a man about forty years of age, who presented marked paralysis and wasting of the scapular muscles on the left side, and a well-defined area of anæsthesia over the opposite shoulder. The symptoms had come on since an attack of variola about four months ago. Dr. Mackenzie also showed a child with Urticaria Pigmentosa.

Mr. BARWELL read notes of a case of Section of the Femur above the Small Trochanter, for Angular Anchylosis of the Hip. William D——, aged twelve, had, when five years old, severe hip-disease and many abscesses about the joint. After several years he got about on crutches, but the result was a thigh flexed at right angles to the pelvis, and somewhat adducted. The deformity was extreme. The altered state of parts about the neck of the bone rendered section at that place inadmissible; section below the trochanters was rejected because Mr. Barwell considers such operation must produce very considerable shortening, equal in amount to the distance from the centre of the head of the bone to a point below the small trochanter—viz., from two to three inches. The operation of Rhea Barton and that of Louis Sayre—viz., the removal of a wedge of bone from about the junction of the femoral neck and shaft—appears to him as an unattainable result, since an artificial joint at this part of the body, even if it could be secured, could not be relied on to support the weight of the trunk. A review of the results obtained by these surgeons shows that of the two successful cases—one of Barton's and one of Sayre's—motion at the place of section was either never attained or soon ceased. In the case of William D—— all such intention was, therefore, discarded. Mr. Barwell endeavoured simply to secure a straight limb without further shortening than that already produced by the loss of growth which accompanied the original disease. The operation was performed antiseptically on Oct. 30th, by making a crucial incision on the outer aspect of the great trochanter down to the bone, peeling off the periosteum all round, finding the small trochanter and the tendon of the ilio-psoas muscle, passing above this latter part an armed needle, and drawing with the thread round the bone a chain-saw, with which, obliquely upward and outward, the section was made. Barely twenty drops of blood were lost. The patient was taken to bed, and a weight suspended to the foot. No suppuration followed, nor indeed any other bad symptom, the temperature being

good throughout. Union of soft parts by first intention, except where the drainage-tube was inserted, and that channel healed as soon as the drain was withdrawn.—*Result:* The boy stands upright and straight; the limb parallel with the other; the shortening is barely an inch, and that appears due to lack of growth in the bone, not to the operation. He walks almost perfectly, and without sway of the body. Mr. Barwell especially directed attention to the fact that this end was attained by an operation which, being subperiosteal, secured so rapid a union of bone that the boy was in bed only thirty-three days. The temper and the small size of surgical needles gave rise to a little difficulty in getting a thread round the bone. An instrument devised on the principle of Belloc's sound was exhibited by Mr. Barwell, the use of which renders the operation quite easy.—Mr. HEATH said that in cases where it could be applied Mr. Adams's plan could not be improved on; but there were some cases where Mr. Barwell's method was advantageous—e.g., in a woman he has now under care, who has had chronic hip-disease from early childhood, and in whom it is impossible to define the neck of the femur. Division between the trochanters is better than Mr. Gant's method of section below them, owing to the tilting of the bone by the psoas muscle. When in London, Dr. Sayre showed a model of the preparation from his case, but it hardly seemed an accurate representation, so perfect was the joint. Besides, it is doubtful whether a stiff limb be not preferable to a joint in that situation.—Mr. BARWELL briefly replied.

Two papers contributed by the PRESIDENT were then read by the medical secretary (Dr. F. Taylor). The first was an account of "Ten Cases of Rheumatic Fever treated with Salicin." The author states that for some years past he has been in the habit of testing carefully and methodically in a series of cases the several remedies from time to time proposed for the treatment of rheumatic fever. During the last three years he had treated in the Middlesex Hospital ten cases with salicin, and fifty with salicylate of soda. All the patients were confined to bed until the fever had entirely subsided. The diet consisted of milk, beef-tea, and sometimes eggs; stimulants were sparingly given; the affected joints were wrapped in cotton-wool, and when pericarditis or endocarditis was present, belladonna and iodide of potassium ointment was applied over the præcordia. In most cases simple effervescing medicine was prescribed on the day of admission, and aperients and occasionally sedatives were given, but the latter as seldom as possible. In all the cases treated with salicin, and in many of those treated with salicylate of soda, the urine was examined the day after beginning the medicine, and found invariably to yield the characteristic reaction with perchloride of iron. In order to exclude cases of mild type which, especially in young subjects, rapidly improve under any kind of treatment, the salicin or salicylate was not prescribed until the patient had been from twenty-four to thirty-six hours in the wards. —Case 1. First attack. Incipient pericarditis. Salicin in full doses on day after admission. Temperature began to fall on third day, became normal on sixth. Pains abated on second day, and ceased on fifth. The salicin taken every two hours for six days, then for two days every four hours, and for nine days every six hours. A mild relapse occurred whilst taking the drug. Epistaxis occurred in this case, and the heart's action became feeble, requiring stimulants. Discharged on sixty-sixth day.—Case 2. Sixth attack. Admitted on fourteenth day. Mitral disease and pericarditis. Pain diminished on second day of treatment, ceased on sixth day. Temperature fell on third day, and became normal on fifth. Salicin given every two hours for six days, then every four hours, but a relapse occurring the frequency was again increased to two hours. Vomiting and headache became so severe that at the end of ten days more the drug was discontinued. Pleurisy and a second attack of pericarditis occurred. Discharged on 107th day.—Case 3. First attack. Ailing several weeks. Pericarditis. Pains rapidly subsided and temperature became normal on the fourth day of taking the drug, but cardiac failure was very marked, and the salicin was discontinued on the eighth day. Discharged with an apex-systolic murmur on twenty-fifth day.—Case 4. Third attack. Old mitral disease, and a recent basic murmur. Pericarditis supervened two days after salicin commenced. The temperature soon fell to normal, but pains and vomiting did not subside with it. A mild relapse occurred after the salicin was discontinued; iodide of potassium was given, and patient discharged on fifty-eighth day.—Case 5. Third attack; relapse; pericarditis. Temperature normal, and pains greatly subsided on fourth day. Epistaxis supervened, and pulse became small and feeble on the third day. Discharged on twentieth day.—Case 6. First attack. Temperature fell to normal, and pains subsided after two days' treatment, but pericarditis developed. Pulse became very feeble; vomiting and epigastric pain occurred nine days after commencement of treatment, unrelieved by reduction in frequency of the drug, which was discontinued on the eleventh day. A relapse occurred, but salicin was not prescribed again. Discharged on forty-sixth day.—Case 7. First attack; third day. Temperature fell to normal on third day of treatment. Pains and vomiting subsided more slowly. Salicin continued till twenty-third day, and patient discharged on forty-fifth day.—Case 8. Second attack; tenth day. Temperature fell to normal, and pains subsided within thirty-six hours from commencing to take salicin, which, at first given every two hours, was afterwards reduced owing to feebleness of pulse, and omitted on the twelfth day. Discharged on twenty-third day.—Case 9. Second attack; third day. Complicated with pneumonia. Temperature became normal on tenth day; pains continued a day or two longer. Sounds and impulse of heart became very feeble on twelfth day. Discharged on thirty-third day.—Case 10. Second attack; sixth day. Double pneumonia and hæmaturia; endocarditis and pleuro-pericarditis. Pains in joints disappeared on the seventh day of treatment, but temperature remained high until after the salicin had been discontinued, on account of persistent and uncontrollable sickness. Chloral and morphia were required frequently at night, and stimulants were freely given on account of the dyspnœa and feeble and irregular action of the heart. Twenty grains of salicin were given every two hours for seventeen days. It caused sickness at a very early period, and after a few days dryness and soreness of throat. Discharged on fifty-eighth day. Thus the effects of the drug were not very satisfactory. The temperature appeared to be reduced and the pains to subside in the uncomplicated cases; but in Cases 1, 2, 4, and 6 relapses occurred when the salicin was either discontinued or the frequency of the dose diminished. Case 5, one of relapse, had already been laid up some time, and recovery might have been as rapid under simple rest and diet; while in 9 and 10, complicated with pneumonia, the salicin did not appear to exert any influence on their progress. On the other hand, salicin appeared to produce some inconvenient consequences. In one case epistaxis, which recurred when the dose was increased; in four cases marked cardiac depression; nausea and vomiting in two cases. Lastly, the detention of the patients in hospital was not shortened by the treatment; for, except Cases 3, 5, and 8, two of which were approaching their close when admitted, the patients treated with salicin recovered more slowly than is common in cases of similar severity under other modes of treatment.

The title of Dr. GREENHOW's second paper was "Cases of Rheumatic Fever treated with Salicylate of Soda." These cases were fifty in number, and abstracts of a few of them were read. It would be impossible to reproduce these abstracts here, but we may give the conclusions arrived at by the author. He discusses, firstly, the physiological, and then the therapeutical, effects of salicylate of soda. One of the most obvious effects of the treatment in the majority of cases was a speedy fall in temperature, sometimes within a few hours from commencing the treatment, and, save in a few cases, within two or three days. The pulse usually, but not invariably, came down in frequency with the fall of temperature. In forty-five of the fifty cases certain well-marked physiological symptoms attended the reduction of the fever. There were effects on the nervous system, such as deafness, vertigo, headache, noises in the ears, delirium, and hallucinations. Deafness often occurred early, and was noticed in twenty-seven cases. Sometimes it was very intense. Vertigo occurred in fourteen cases. Very intense headache, chiefly frontal, though less frequent than deafness and vertigo, was, when it occurred, a much more distressing symptom. It was complained of in nine cases, and in some recurred with the resumption of the medicine. Delirium was present in eight cases, hallucinations in four. Great depression of pulse and action of the heart was the most important effect produced on the circulation, more or less weakening of the pulse, calling for stimulants in almost every case, great weakening of the impulse of the heart, and in ten cases almost complete obliteration of the first sound; in some, an irregular or dicrotous pulse. Vomiting occurred in twenty-two cases;

great injection of the tongue in many cases; soreness of the fauces in three, and an aphthous state of the tongue in three cases; diarrhœa in two cases was evidently referred to the salicylate; epistaxis occurred in seven cases; in two transient albuminuria was observed; in two others tremor of the hands and tongue, which may not have been due to the drug. Speaking of the therapeutical value of salicin and salicylate of soda in acute rheumatism, Dr. Greenhow said that his experience led him to regard these as the most powerful antipyretic agents with which he was acquainted. The temperature soon falls under their use; the pulse commonly falls at the same time, and the pains soon abate very considerably, and in most cases entirely cease within a few days. But the improvement in the symptoms only takes place coincidently with the development of one or more of the physiological phenomena already described; and in all the most acute cases the relief derived from the medicine passed away soon after the treatment was intermitted, and a relapse—in some cases several relapses—took place. On this ground these agents cannot be regarded as in any respect specifics in the treatment of rheumatic fever. Excluding two cases, which passed into the state of hyperpyrexia whilst under the physiological influence of salicylate of soda, two other cases, which proved fatal, and about fourteen very mild cases, from which no conclusions could be drawn, there were relapses in twenty-one out of the remaining thirty-two cases. In seven of these twenty-one cases there was only one relapse; in nine there were two; in two there were three; in other two four; and in one five relapses. A proportion of twenty-one out of thirty-two was a large one for relapsing cases, and in most of the cases the relapse was due to the passing off of the influence of the medicine. The paper concluded as follows:—"Fully admitting, therefore, the great immediate relief that appears to follow the use of these agents in the treatment of rheumatic fever, there still remains for consideration the further question whether, upon the whole, the treatment is successful. The answer to this question must depend upon whether the complications which are apt to arise in rheumatic fever are less frequent under this treatment; whether the condition of the patient after recovery is better or worse than under other modes of treatment; and lastly, whether the length of time during which the patient is disabled is shorter or longer under this than under other modes of treatment. To all these questions my experience leads me to reply in the negative. We might have, perhaps, expected that hyperpyrexia at least would have been prevented by the use of such a powerful antipyretic agent, but the first two cases I have recorded negative this expectation, for hyperpyrexia was developed in both of these after the proper physiological influence of the salicylate of soda had become manifest. Pericarditis was present in many cases before the treatment was commenced; but, in several instances, it supervened afterwards. In three cases pneumonia, and in four others pleurisy supervened, when the physiological effects of the medicine had become manifest. On the other hand, several cases that were admitted with either pleuro-pneumonia, broncho-pneumonia, or bronchitis ran very much the course we are accustomed to witness in similar cases under other treatment. Patients treated with salicylate of soda appeared to me to become unusually anæmic and to regain health and strength very slowly. They are long in becoming fit to resume their occupations, and their recovery has appeared to me more tedious than has been the case with patients treated on other methods. Excluding the two cases of hyperpyrexia, the two fatal cases and nine very mild cases, which were on the average less than twenty days in the hospital, and, perhaps, recurred neither more quickly nor more slowly than such cases commonly do, I find that the remaining thirty-seven cases were on an average fifty-seven days each in the hospital. This period, however, by no means represents the duration of their disabling illness, for all had been at least a few days ill previous to admission, and probably none was discharged in a condition to resume work, many having been sent to convalescent hospitals, and others to their friends in the country to recruit. If now we examine into the duration in hospital of the cases treated with salicin, a very similar result is shown. Two cases which were admitted in an advanced stage of their illness being excluded, the average residence in hospital of each of the remaining eight cases was fifty-five days. With regard therefore to the treatment of rheumatic fever with salicin and salicylate of soda, we must, I think, come to the conclusion that most physicians did with regard to the treatment with blisters—viz., that the pain and distress of the patients are undoubtedly for a time greatly assuaged, but that the duration of the illness is not shortened. Of the two plans, I am of opinion that blisters applied in the vicinity of all the painful joints are by far the most efficacious and speedy in the relief they afford, and have the advantage of not producing so much subsequent debility. Another question now presents itself for our consideration—namely, whether it is not possible that some injurious consequence may result from the powerful action of the medicine upon the heart; and I am bound to express my fears that the marked weakening of the first sound of the heart present in so many cases indicates the exertion of an influence upon the muscular structure of that organ, which may not always pass entirely away when the treatment is suspended, and more particularly when either inflammation of the endocardium or pericardium or of the muscular structure itself exists during the treatment."

Dr. SILVER in cordial terms thanked the President for his paper, in which he had stereotyped our knowledge of the action of these medicines with a rare accuracy of detail. He himself could corroborate the view there taken. As a rule, within three days the temperature is reduced, pains disappear, but the patient is not much better. His present impression was that the drugs were of great value in reducing the temperature and pain, but once the dose was diminished the disease recurs again and again. The best plan was, he thought, to give salicylate of soda for a day or two till pain has disappeared and the temperature has fallen, then to discontinue it and to prescribe quinine or alkaline bicarbonates. —Mr. H. DAVY said that having himself been thrice the subject of rheumatic fever his experience might be acceptable. He believed that it is a very difficult matter to rightly estimate the value of various kinds of treatment, and he could not help thinking that many physicians had arrived at different conclusions from those of the President. When house-physician at Guy's Hospital he had carefully watched some twenty or thirty cases, and from this experience he believed that although these drugs do not prevent complications arising, they relieve pain and pyrexia, and that cases so treated are more free from complications and relapses than appeared from Dr. Greenhow's experience, nor had he seen any serious vomiting occur. After Dr. Maclagan's statement as to the superiority of the salicin over the salicylate, he had prescribed the former, and although hallucinations, light-headedness, deafness, &c., were frequent, they were of small importance in comparison to the amount of relief given to the patient. Relapses were quite as much due to a too early return to fish diet as to the drugs. In his own three several attacks he had been under different treatment; the first time—a mild attack—he was treated by a country practitioner with opium and bleeding; the second time, when the rheumatism was complicated by scarlet fever, he was treated by a London physician with alkalies and without milk. The attack was brief, but he was anæmic for some months after. The last time he prescribed for himself under Dr. Taylor's supervision. He took fifteen grains of salicin every two hours, and in two days the temperature had fallen from 103° to normal, and in ten days he was out of bed; whilst taking the drug he had slight deafness and hallucinations.—Dr. H. WEBER said that the results arrived at in his previous paper were indifferent, but the conclusion he came to was that the treatment was on the whole more successful than any treatment he had formerly applied. Since that time he had given these drugs in many cases, and his results had not been so unfavourable as the President's. He had found that among forty-four patients treated with salicylate of soda, the average number of febrile days, including relapses, were fourteen; whereas in seventy cases otherwise treated the average number of febrile days were nineteen. He had not included the number of days in hospital, because in the German hospital most of the patients, being homeless, were retained longer than usual to prevent relapses. He thought that complications were not so frequent in cases treated by the salicylate; and since he had employed it he had not seen any cases of hyperpyrexia. As a rule, the urine yielded the perchloride of iron reaction on the first or second day of treatment by salicylic acid, but not by salicin. The author had not endeavoured to explain how salicylate of soda acts; he seemed to imply that it acted merely by reducing the heart's action. He himself (Dr. Weber) admitted this effect on the heart; but suggested that these drugs may act by a process of fermentation in the blood; for salicylate of soda diminishes the

amount of sugar in diabetes. And he had found in cases where there is a rapid formation of bacteria in the urine, that the salicylate of soda diminishes this tendency.—Dr. CAVAFY said that his own experience of these drugs in acute rheumatism dated from 1876, and he had frequently observed the effects of salicylate of soda given in considerable doses—e.g., half a drachm every two hours at the beginning, with a subsequent diminution in dose and frequency. In some particulars his experience was not in harmony with Dr. Greenhow's; for instance, that improvement only occurs coincidently with the development of toxic phenomena. Only a small percentage of his cases showed toxic effects. Nor did he think too much importance should be given to those unpleasant symptoms of deafness, tinnitus, delirium, &c.; they were distressing, but did not result in permanent harm; and they could be controlled by remitting one or two doses, or they subsided when tolerance was established. The proportion of cases of albuminuria out of fifty was a small one, and probably due to some accident, rather than to the drug. The relapses depend much upon the time during which the drug is continued in small doses. After saturation with the drug, if its administration be continued in small doses for a longer time than usual, relapses may to a considerable extent be avoided—especially if the diet is kept low. To be sure, in some cases recovery was tedious, but that is often the case in rheumatism. Still, in cases which are moderately severe at the onset, it was possible to get the patient out of bed in five days. He had met with a case of a lady who had previously had two attacks of rheumatic fever, of long and tedious duration, confining her to bed for many weeks. On the third or fourth day of her third attack, temperature 102·8°, swelling of several joints, and turbulent cardiac action. She was placed upon salicylate of soda in twenty-grain doses, and within a week was up and about. There was no relapse. Dr. Greenhow's cases included two fatal ones. Had the drug any share in this result? The weakening of the first sound of the heart may be due to the pyrexia.—Dr. HEWAN said that he took a personal interest in the subject of remedies for rheumatism. Being intolerant of salicin and salicylate of soda, which produced sickness at the onset, he took salicylate of quinine in a recent attack of rheumatic fever, having heard of the drug a short time previously. The result was most satisfactory, and he had since prescribed it in rheumatic fever and gout. One lady who had been confined to a chair for a year with rheumatic gout was enabled to walk about in two or three weeks after commencing to take the salicylate of quinine.—Dr. BURDON-SANDERSON said it was impossible not to have derived great pleasure and instruction from the paper and the debate that had arisen upon it. It was satisfactory that the experience of other members of the Society was more favourable to the drugs than that of the President. In reference to Dr. Weber's remarks, he would remind the Society how these drugs came into use. They were earliest employed in 1872 in Germany on grounds based on experimental therapeutics. Binz had shown by his experiments that quinine prevented septic fermentation, as well as having an antipyretic action. Then Kolbe showed salicylic acid to be a more powerful antiseptic agent than any other agent, and from this the inference was made that probably it, too, would be antipyretic. This was confirmed by experiments on animals and in hospital practice. Dr. Sanderson remarked that he believed he was the first to speak of this action in his lectures on the Febrile Process at the University of London in 1874.—Dr. DUCKWORTH believed the drugs to be of very great value, not properly speaking specific, but capable of relieving the urgent symptoms. Tinnitus, deafness, &c., were not of great consequence. Pain was diminished; the febrile process itself was curtailed, and the duration of illness limited provided that the influence of the drug was kept up and the diet regulated. He had now given up the alkaline treatment, in which he had much confidence, in favour of salicylate of soda.—Dr. DOUGLAS POWELL remarked that one of the most important questions was what is the minimum dose at which the result could be obtained? He would reluctantly give thirty grains every two hours, and his impression was that fifteen grains sufficed. Dr. Sanderson's remarks reminded him of a fact he had noticed—viz., that the urine of patients on salicylate remains much longer unchanged than in ordinary circumstances.—Dr. F. TAYLOR reminded the Society that rheumatism sometimes recovers of itself—e.g., such cases as those mentioned by Dr. Silver, which get well in two or three days,—recoveries which could not be put to the credit of the salicylate treatment. He was not himself much impressed with the value of the drug; he had seen many prolonged relapses under its use. He thought the subject would have to be worked out by comparison of cases so treated with other cases.—The PRESIDENT, in reply, said that his paper was only a contribution to the subject, in which he had stated honestly the result of his experience. As a hospital physician he had tried several plans for the treatment of rheumatism from time to time. He had started on his inquiry with no preconceived idea; for although he had some impression of the results of the treatment, he had no definite grounds. He should be glad if his experience proved to be exceptionally bad, for he had come to think that drugs were of little use in rheumatic fever, rest and diet being the chief things. He invariably kept his cases on milk diet for a long time, knowing that too early a return to fish or meat diet caused a relapse. He had not attempted to explain the action of the drug. It reduces the action of the heart; and its effect is therefore injurious in the presence of myocarditis, &c. Certainly it reduced temperature and pain in three or four days; but these good effects were neutralised by the unsatisfactory results in the after-history. The reaction with perchloride of iron on urine occurs both in cases treated by salicin and those by salicylate. He had concluded that small doses frequently repeated were better than large doses—e.g., half-drachm,—owing to the rapidity with which toxic effects appeared in the latter case. Relapses could not be obviated unless the patient were thoroughly saturated with the drug; a diminution in the frequency of administration often led to a relapse. He concluded by thanking the Society for the attention with which his paper had been received.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of the Society held at Adam-street, Adelphi, on April 16th, Dr. Bristowe, President, in the chair, Mr. A. Wynter Blyth read a paper on the "Prevention and Propagation of Diphtheria." After stating that diphtheria appears to belong to a group of six diseases—viz., scarlet fever, erysipelas, croup, quinsy, and puerperal fever, and that its prevalence appeared to be irrespective of sanitary condition, households in a good sanitary state being equally affected with those exhibiting sanitary defects, and enumerating the chief causes of ordinary spread, the author asked, What is the most probable cause of the outbreak of the so-called spontaneous or sporadic cases in which there has been no known contact, in which it breaks out in a haphazard manner in spots having no discoverable connexion? He believes we have fairly strong evidence to accuse the atmosphere, and that such cases may be fairly ascribed with some degree of certainty to the wafting of the specific poison by currents of air. The idea of propagation by the air has been too hastily thrown aside, a rejection probably due to the classical writings of Bretonneau,[1] who held that although the disease was caused by dustlike diphtheritic atoms impacting themselves on the mucous membrane, he yet distinctly states "that the Egyptian malady is not communicated by volatile invisible emanations susceptible of being dissolved in the air, and acting at great distances from their point of origin; it no more possesses this property than the syphilitic disease." A comparatively recent study of the diphtheritic epidemics, which have occurred in the county of Devon, have, however, convinced the author that this utter denial of the possibility of aerial infection is going too far; indeed, he believes that the chief carrier of the infection is the air. This opinion he has mainly adopted from two remarkable cases occurring in the practice of Dr. C. Budd, of North Tawton, the course of which, and his ideas as to its origin, as well as the measures he successfully adopted to prevent its further extension, Dr. Blyth gives in his own words:—"On the 26th of March, in the present year, out of a household of about thirty persons, all in perfect health, two, a governess, aged twenty years, and a child of seven

[1] Bretonneau's fifth Memoir.

years, walked in the afternoon for an hour or more in the grounds of the mansion in the teeth of a bitter east wind. In the same night both of these persons complained of malaise, and the child had in consequence a grey powder given to her. On the day following both complained of sore-throat, and early in the morning of the 28th I was sent for to visit them. I found the throats of both presenting all the characteristic appearances of diphtheria; in fact, the cases were typical. The left tonsil of the little girl was covered with the diphtheritic membrane, which before night extended to the right tonsil affecting the posterior surface of the uvula in passing. The malady rapidly assumed alarming proportions, affecting the whole of the pharynx and the posterior nares. For many days the child was in imminent danger; after a while the acute symptoms subsided, and she appeared to be approaching convalescence. During the whole of this period the intellect was perfectly clear, all the functions of the body were natural, the temperature was little, if any, above the normal standard; as far as I am capable of judging there was not the slightest evidence of blood contamination. The case of the governess was similar in every respect with the exception that it was far less severe, and was followed by no sequelæ. Then came the question of the origin, knowing how in all infectious disorders mild cases not unfrequently pass unnoticed, I was most particular in my inquiries as to the preceding state of the household. I could learn of no symptom of a preceding case in the house. I made inquiries of the neighbouring medical men, and could learn of no case in the neighbourhood. It was clear to me that both of these persons were struck simultaneously, and the idea then presented itself that the air was the vehicle of the poison, and that the spores of some fungus implanted on the mucous membrane of the fauces might probably afford an explanation of the malady; the analogy of the rust on wheat about which I had interested myself years before, appeared to me to strengthen this view. Upon it I based both treatment and preventive measures; the former consisted in keeping the fauces saturated by means of syringe and spray producers with solutions of carbolic acid and borax in glycerine and liquor sodæ chlorinatæ. As there was great difficulty in swallowing, the child was nourished mainly by enemata; the extreme restlessness was subdued by repeated doses of morphia, from which marked benefit was derived. The preventive measures were as follows:—The patients were isolated, the mother and three nurses were detailed to attend upon them, all the vessels, glasses, plates, &c., used by the patients were disinfected in the rooms, and were not allowed to be sent to any other part of the house. All the linen was immersed in a solution of Condy's fluid in water, rags used in wiping the discharges from nostrils and fauces were burnt, but the precautions upon which I most relied to prevent the spread of the disease to the attendants was the keeping their throats, including my own also, saturated with the same solutions. All escaped with the exception of the mother, who had two or three small patches on the left tonsil which would have been scarcely noticed but for the daily examination of the throats. Such, then, is an imperfect description of what I will call the acute stage of the disorder, and if this were all, all would be well; but about the 18th of April the child, apparently convalescent, was taken out without my sanction in an open carriage for two consecutive days. The temperature of the air being very low for the time of year, then followed sequelæ of the most terrible kind, albuminuria, endocarditis, paralysis of the superior laryngeal, with aphonia and complete inability to swallow, every attempt to do so being followed by violent convulsions and coughing, induced, doubtless, by particles of food passing into the trachea; after a second long and distressing illness, however, the child recovered." The author then related several other cases which appeared to support the theory of aerial infection, and entered very fully into the history and present condition of the fungus theory of the disease. He then proceeded to state—"Aerial infection does not, however, require that the elements of contagion should be fungoid; all that the theory requires is the emanation of material—excessively minute particles evolved from the affected mucous surfaces. Probably it is only when this contagion falls on a moist surface that it can develop, and even when it does attach itself to the pharynx in many cases it is unwittingly got rid of by the mere mechanical mechanism of swallowing, &c." The author concluded by expressing a hope that the method of keeping the throats of the diphtheritic, as well as the throats of those in contact with them, frequently disinfected will be fairly tried.

Reviews and Notices of Books.

Water Analysis for Sanitary Purposes, with Limits for the Interpretation of Results. By E. FRANKLAND, Ph.D., D.C.L., F.R.S., &c. London: Van Voorst. 1880.—Professor Frankland has rendered another valuable service to sanitation by the preparation of this little manual. Much of the matter has appeared before in scientific journals, in the admirable reports of the Rivers Pollution Commission, and elsewhere. But such sources of knowledge are not universally available, and are inconvenient for constant use, and everyone interested in public health will therefore be grateful for this succinct and intelligible account of the present state of our knowledge of the chemistry of water. A short introduction points out the objects to be attained by water analysis, and the chief constituents to be determined, and gives directions for the collection of samples and for the highly-important study of the previous history of the water. This study commonly falls within the province of the medical man, who is often able, by a careful examination of the surroundings of a well or river, to form a very good estimate of the character of the water, even without an analysis. Part I. is devoted to "Water Analysis without Gas Apparatus." The observation of colour, taste, and smell, the estimation of total dissolved to suspended matters, of ammonia, of chlorine, of hardness, of nitrogen present as nitrates to nitrites, and of poisonous metals, come in here, as do the gravimetric methods of Dittmar and Robinson, and of Dupré and Hake, and the well-known Forchammer, or permanganate, process for the approximate estimation of organic matter. The last has long been used, and the recent papers of Dr. Tidy have satisfied most chemists that it is, within certain limits, trustworthy. Griess's method for the estimation of nitrites by the use of meta-phenylenediamine, is commended as delicate and accurate. Part II., on "Water Analysis requiring the use of Gas Apparatus," contains a full account of the methods devised by the author and Dr. Armstrong, with all the latest improvements. This method is now well known. It requires apparatus which is expensive to those who are not skilful enough to make it, some familiarity with the methods of gas analysis, extreme care in manipulation, and, above all, a good deal of time. But it is in good hands very trustworthy, and gives results which can be obtained by no other process. The difficulties are, moreover, not greater than those which every trained chemist is accustomed to conquer. Valuable standards of purity and contamination are given in this and other parts of the book, and an appendix contains an account of the reagents required for the various processes, many useful tables, typical analyses, and, lastly, the conclusions and recommendations of the Rivers Pollution Commissioners. It will be seen that, on the whole, the book is one which can be neglected by no chemist, and, above all, by no medical officer of health.

The Lay of the Bell (*Das Lied von der Glocke*), *and other Ballads by* SCHILLER. Translated into English metre by ANDREW WOOD, M.D., F.R.S.E., Fellow of the Royal College of Surgeons of Edinburgh, member of the General Council of Medical Education and Registration of the United Kingdom. Edinburgh: William P. Nimmo & Co. 1879.—Dr. Andrew Wood continues to devote his leisure moments and his literary abilities to the work of translating classic writers, and in a small and finely printed volume he offers the public a rendering into English metre of Schiller's famous "Song of the Bell," and other ballads. It would scarcely be correct to say that Dr. Wood has succeeded in giving us a perfect representation of these ballads of Schiller. It is always a safe thing to say of an author, as of an artist, that he would have succeeded better if he had

taken more pains, and had our translator bestowed more labour on his task there would have been less ruggedness, angularity, and inelegance of expression than we find, and more of the flowing musical cadence that distinguishes Schiller, especially in "The Song of the Bell." For example, in the few lines beginning "Von dem Dome," the translator might have made the sound more thoroughly harmonise with the sense, as Schiller does. In the introduction Dr. Wood gives a brief notice of each ballad, telling the story in his own way, the more clearly to illustrate and explain the ballad.

The Journal of Psychological Medicine. New Series, Vol. VI., Part I.—The articles in the current number are for the most part of a popular rather than of a scientific character. Dr. Winn discusses the Collapse of Scientific Atheism in an article the spirit and tone of which will probably be regretted even by those who sympathise with its object. Mad Artists is a readable sketch of the lives of James Barry, William Blake, Benvenuto Cellini, Haydon, Edwin Landseer, George Morland, Gottfried Kund, J. M. W. Turner. The sketches have been written with care, but it seems scarcely justifiable to designate every artist whose death may have been occasioned by a chronic brain disease, a "mad artist." Psychological physicians are sensitive when they are called "mad doctors," but this is turning the tables with a vengeance. The Curability of Insanity, by Dr. W. A. F. Browne, is an expression of scepticism as to the exactness of the so-called "cures." Mr. Major Greenwood contributes a paper on Psychology in relation to Medicine. The only article of scientific aspect is a paper by Dr. A. E. Macdonald, of New York, on General Paresis, which is merely an account of the facts of the disease, known to every student, with the particulars of four ordinary cases.

Surgical Emergencies, together with the Emergencies attendant on Parturition and the Treatment of Poisoning. A Manual for the use of General Practitioners. By WILLIAM PAUL SWAIN, F.R.C.S., Surgeon to the Royal Albert Hospital, Devonport. Third Edition. London: J. & A. Churchill. 1880.—Mr. Swain's useful little book is now well-known in the profession, and the third edition, which has in several respects been improved, will no doubt maintain the reputation of the author. Lister's antiseptic treatment is of course carefully described, but we fail to find any mention of the proper treatment of carbolic-acid poisoning which has of late years become so common. In a manual so small as this much that some of us would think of importance must necessarily be omitted, and this may account for some of the more recent improvements in surgery being unnoticed—such, for example, as Davy's lever and Roussel's transfusion apparatus. The author does not advance any original views, and there is therefore no scope for criticism.

Contributions to Cardiac Pathology. By JOHN COCKLE, A.M., M.D., Physician to the Royal Free Hospital, &c. London: Baillière & Co. 1880.—In a small work of eighty pages Dr. Cockle has collected six papers in relation to cardiac pathology which he has contributed to medical journals. They are certainly of sufficient interest and merit to justify their publication in the present form, and although in many points we are not quite prepared to agree with the author, we must give him credit for the clearness with which his views are expressed, and the knowledge of the literature of the subject which is everywhere shown. Everyone who is specially interested in cardiac cases would do well to peruse Dr. Cockle's small memoir.

Brain. April, 1880. Macmillan and Co.—The first place in the current number is given to a paper by Dr. Dyce Duckworth, entitled a Plea for the Neurotic Theory of Gout. The various arguments which can be adduced to support the view that gout is a primary neurosis, and not a "humoral" disease, are skilfully marshaled. The idea is of course an old one, dating from Stahl and Cullen; and Dr. Duckworth received it, he tells us, from his old teacher, Dr. Laycock. M. De Watteville discusses, in the next paper, the conditions of the Unipolar Stimulation in Physiology and Therapeutics. The next two articles are on Paraplegia: the one by Dr. Duncan, of Edinburgh, on the Paralysis which results from Caries of the Spine; and the other, to which we have already called attention, by Dr. Buzzard, on some varieties of Cervical Paraplegia. The last article is a brief but careful account of the Arteries of the Spinal Cord, by Dr. Ross of Manchester. The "Clinical Cases" are of much interest, especially one by Messrs. Bastian and Horsley on the association of a small Parietal Convolution with arrest of development in the Left Hand.

Practical Chemistry. The Principles of Qualitative Analysis. By WILLIAM A. TILDEN, D.Sc. Lond., F.C.S., Professor of Chemistry in Mason's College, Birmingham, late Lecturer on Chemistry in Clifton College. London: Longmans. 1880.—A good and simple little manual. It presents some few points of originality, but we fail to see that it is better than several other similar text-books already in use. The fact seems to be that no two teachers of any real power have exactly the same ideas as to the details of a course of practical chemistry, and each naturally prefers his own system, and is anxious to leave a book by which his pupils may follow his instructions. Hence the almost infinite multiplication of books of this class.

Analytical Records.

CHRISMA: A NEW BASIS FOR OINTMENTS.

(ALLEN & HANBURYS, PLOUGH-CT., LOMBARD-ST.)

THE remarkable series of hydrocarbons, now known as the paraffins, which extends from hydrogen and marsh gas up to the hardest varieties of solid paraffin, are among the most stable of carbon compounds. They are found in all the many kinds of natural and artificial petroleum and paraffin oil, but their complete separation is a matter of the greatest difficulty. They are not liable to oxidation, and resist even the most potent of chemical agents in a perfectly wonderful manner. Their volatility varies between very wide limits. Some, under ordinary conditions, are gaseous, some liquid, and some solid; the solids having various degrees of consistency. The substance now before us seems to consist of the softer solids of the series. It has about the consistency of lard, is absolutely free from taste and smell, and is beautifully pure. It is almost as cheap as lard, and, as it cannot possibly get rancid, is not affected by any ordinary admixture; it is beneficial in its action on the skin, and is perfectly adapted for pharmaceutical and general family use. There is now no excuse for the use of lard in pharmacy, and the new agent will be found an excellent lubricant, especially where brass or copper is concerned, as it cannot become acid, and therefore cannot corrode the metal.

GREGORY'S DIGESTIVE MEAL.

(C. W. GREGORY, TEMPLE, BRISTOL.)

A smooth, highly nutritious, and easily digestible meal, well adapted for infants and invalids, who will often be able to take this when they reject other food. It is easily cooked, and makes excellent light puddings. We have, indeed, tried it successfully in several forms, and have no hesitation in recommending it.

TOWER HAMLETS DISPENSARY.—The new building of this institution, situate in White-horse-street, Stepney, was opened on Monday last by the Bishop of Bedford. The dispensary was established in 1792 for affording medical relief to the poor.

THE LANCET.

LONDON: SATURDAY, MAY 29, 1880.

THE Fifteenth Annual Report of the Sanitary Commissioner with the Government of India is of interest from the anomalous position which it represents the supreme authority of our great dependency to have taken in medico-sanitary matters, as they affect the vast populations under its rule. The report refers to the year 1878, and elsewhere in this number of THE LANCET we give an abstract of the arithmetical data it contains indicating the health-state of the European and Native Forces in the peninsula, and of the Civil Population during the year. Here we propose to refer to certain fundamental differences which obtain between the principles of sanitary administration in India and in this country, not new to our readers, but which chance to be emphasised in the present report of the Sanitary Commissioner. Commenting upon the inutility of "quarantine" as a measure for the arrest of the spread of cholera, Dr. CUNINGHAM observes, "As has been frequently pointed out, the only real effective weapon against cholera consists of sanitary improvements. In this point of view the time and trouble so often devoted by medical officers in endeavouring to find out the source of supposed importation and infection might be spent to better purpose." Then follows a paragraph from certain recent Orders of the Government of India with reference to the Berar Sanitary Report for 1878, in which it is said:—"The chapter on cholera is occupied too much with the statements and opinions of civil surgeons on the importation-doctrine. *Little or no practical good can be expected from such inquiries, and it is therefore of great importance that the time of the medical and other officers should not be spent on them.* [The italics are ours.] If it were demonstrated that cholera is spread by human intercourse alone, nothing could be done to prevent such intercourse. Even those who are most strongly in favour of the contagion-theory admit that local conditions determine whether the disease, supposed to be introduced by travellers, or pilgrims, or others, is to become epidemic or not, and it will be much more likely to lead to useful results if in future inquiry attention is more directed to an examination of what these conditions are, and how they may best be improved." In other words, the Government of India in the year of grace 1878, with regard to the medical controversy on the conditions which promote the prevalence and spread of cholera, revert to and adopt opinions similar to those which were held by the Poor-law Commissioners in 1842, and which Mr. EDWIN CHADWICK expressed in the famous report on the Sanitary Condition of the Labouring Population of Great Britain, with regard to the medical controversy then in progress on the causes of fever, to wit, that it "does not appear to be one that for practical purposes need be considered, except that its effect is prejudicial in diverting attention from the practical means of prevention." And this reference to an official opinion of thirty-eight years ago is all the more suggestive because it is obvious from Dr. CUNINGHAM'S report that the same attitude is assumed by the Government of India towards what it is pleased to call "the importation doctrine" in certain sorts of "fever" as in cholera.

Mr. CHADWICK'S opinion was expressed on the eve of those great discoveries in the discrimination of fevers and their causes which have revolutionised our knowledge of them and of their preventive treatment throughout the civilised world, but which as emanating from a barrister who had stepped outside his functions when he entered into the field of medical controversy, exercised little or no influence on medical research. The opinion of the Government of India is expressed after it has been shown in this country and on the Continent of Europe that an intelligent adaptation of practical sanitary measures to the prevention of cholera is proved to be impracticable, except the "importation doctrine": in other words, the doctrine of the communicability of the disease from the sick to the well be accepted; and, further, the opinion amounts virtually to a prohibition of the line of research as to cholera within the limits of its home, which has proved to be of incalculable advantage to communities outside its home, and which, moreover, is believed to be called for as much in India as elsewhere by the greater number of Indian medical officers. The revival at the present day of the crude official pathology and etiology of this country in 1842 as the official pathology of the Government of India, is a remarkable anachronism. Now, moreover, that the Government of India has taken the course of at least discountenancing certain lines of investigation in the etiology of cholera, and it may be added of "fevers" also—of the two forms of epidemic disease, in fact, which prove most fatal to the army and population of India,—the attention of the Imperial Government may perhaps be directed to the strange anomaly and to the stultification by India of the teachings of Netley.

An appendix to Dr. CUNINGHAM'S report contains a memoir by Dr. D. D. CUNNINGHAM, one of the special assistants to the Sanitary Commissioner "On the Development of Certain Microscopic Organisms occurring in the Intestinal Canal." When these organisms were first noticed in Europe they were thought to have some special relation to cholera. The opportunities for studying them in India, not only with regard to cholera, but with regard to other morbid conditions affecting the intestinal canal, are much more numerous and favourable than in Europe, and Dr. D. D. CUNNINGHAM has submitted the organisms, and the conditions under which they are found, to a very elaborate examination. He thinks that they represent a rudimentary form of the myxomycete group, and that the organism may be conveniently distinguished as *Protomyxomyces coprinarius*. He has found them very frequently in the human subject, both in health and disease. They appear to have no special relations with cholera or other form of malady, but are observed in cases where the excreta have passed through the initial processes of decomposition and become alkaline. After exit from the body the usual series of fermentative changes through which human excreta often pass insure the complete destruction of the parasitic elements, but this is not the case with the excreta of certain of the lower animals, especially cows and horses. The changes undergone by the former, and the development of the

parasite outside the body, serve as a constant source for its reproduction and diffusion, which, so far as man is concerned, is effected chiefly through the air. The memoir throughout will be studied with great interest.

IN criticising last week Mr. MARSHALL'S proposal to institute at the Royal College of Surgeons a compulsory examination in elementary Anatomy and Physiology at the end of the first year of professional study, we threw out the hint that one of the reasons why the medical student does not make better use of his time during the first year of his curriculum is that his preliminary education is usually insufficient and defective. As an illustration of this we cited the instance of the College's own preliminary examination, at which the subjects for examination in French, German, and Greek have not been changed for many years. The gravamen of our allegation is in no way affected by the disclaimer of "Examiner" published in another column. This communication merely corrects a widespread misapprehension, and shifts to some extent the responsibility from the College of Preceptors to the Council of the College of Surgeons. So far it is satisfactory, and will doubtless serve a useful purpose. The speedy removal of this long-standing evil, repeatedly complained of, may, we think, be confidently left to Mr. MARSHALL. When this is accomplished, and the intellectual tone of the medical novice improved, it will be time, if need be, to think of coercive measures to make students who are wilfully lazy work.

Meanwhile there are many objections to Mr. MARSHALL'S scheme. The time is singularly inopportune for its introduction. At the very meeting at which Mr. MARSHALL revived his proposal it was recommended by a considerable majority that the Council should withdraw from the projected Conjoint Scheme. There was, it must be confessed, less to be said against a Conjoint Examining Board holding an elementary examination at the end of the first year, but for one of several Boards to think of doing so is, to say the least, supremely selfish. If the Royal College of Surgeons be free to force all candidates for its diploma of member to pass an elementary examination in Anatomy and Physiology at the end of the first year, there is no reason why the Royal College of Physicians and the Society of Apothecaries should not separately and individually compel candidates for their licences to pass at the same period an examination in Chemistry, Practical Chemistry, Botany, and Materia Medica. It would likewise be equally competent for the University of London or any other examining Board to refuse to accept any of these examinations as adequate, and each to insist on a separate and distinctive examination by their respective Boards in any or all of these subjects of the first year's curriculum. Such an absurd consummation may not be probable, but on Mr. MARSHALL'S mode of reasoning there would be no logical objection to it. But allowing the time for reviving the proposal to be suitable, we must once more protest against the inadequacy and inapplicability of the remedy which Mr. MARSHALL wishes to use for correcting the medical student's defects. The evil is not to be cured by patching and tinkering expedients. Nothing short of complete and radical reform will suffice. We have no present intention of going into the details of such a measure, but we are convinced that when the fitting time and opportunity arrive attention will have to be directed chiefly to improving the methods and character of the instruction and training supplied by the schools.

THE symptoms of poisoning by arsenic have been well studied and often observed. It is rare, however, that the opportunity occurs of ascertaining their character in a large number of cases of slight degree, and of similar and simultaneous origin. Such an opportunity has lately occurred at St. Denis, near Paris, where a large number of persons have been poisoned by eating bread containing arsenic. In none of the cases was the quantity of the poison sufficient to cause death. So many persons suffered that one physician, Dr. FELTZ, had under his care no less than eighty cases. His account of their symptoms, communicated to the Paris Clinical Society, constitutes a valuable contribution to toxicology. How the poison was introduced into the bread or flour is still undiscovered.

The nature of the outbreak of illness was early ascertained. Dr. FELTZ was called one morning to a family who presented signs which indicated clearly the action of an irritant poison, but the vehicle by which it had been introduced was only ascertained by the discovery that a dog, which had taken only sopped bread, suffered in the same way. In a number of families who had taken the bread, the same symptoms were observed, and arsenic was found in it on analysis.

Most of the persons attacked presented similar symptoms. Soon after the meal a sense of weight at the epigastrium and general malaise were experienced. Vomiting occurred in from one to four hours after the meal, and the first vomited matters were of food. Several patients presented diarrhœa at the same time as vomiting, but in more than half there was no early diarrhœa. The latter ceased in all cases in six or eight hours, while the vomiting continued for twenty-four or even thirty-six hours, and was frequent, of greenish-yellow mucus, and bilious matters. In some patients, who had no immediate diarrhœa, a slight attack occurred in the course of the first day. Others had no diarrhœa at any time. Two patients, who had eaten the bread for two days, had no vomiting, but suffered from diarrhœa for about twelve days, their other symptoms being the same as those of the rest. There was a burning pain in the throat behind the sternum, and in the epigastrium, and at the latter spot a very painful sense of weight. The pulse varied between 90 and 110, and was regular; the skin was dry; headache was severe, with an acute sense of constriction in the temples. Most patients complained of noises in the ears, and of slight vertigo. There was prostration, and a sense of extreme feebleness in the legs, with severe pains in the loins. The latter symptom was invariable. The urine, however, was normal. In some patients during the period of vomiting and diarrhœa, very little urine was passed. In no case was there any excessive urinary secretion. On the third day these symtoms lessened in intensity, but without a single exception there appeared at the end of the second or beginning of the third day a swelling of the eyelids, accompanied by conjunctivitis. In some the whole face was swollen; in some there was an eruption of urticaria; in two women this eruption was scarlatiniform in character. One man suffered only from urticaria of the scrotum and herpes

labialis. Almost all the patients, even those who had no eruption, suffered from irritation of the skin, and, in some, scratching caused a transient eruption similar to urticaria. In eight patients who had eaten of the bread during two days there were visual troubles. Three had a sensation of light in the outer angle of the eyes, others that of flames darting forwards, these sensations being present only when the eyes were shut or in the dark. On the third day there was a sensation of great thirst. The mucous membrane of the throat was red. Many of the patients presented herpetic vesicles on the lips, and one man had herpes on the prepuce. These symptoms continued, lessening, until the seventh day. The appetite was then still deficient, the patients complained of a metallic taste, and the throat was still red. The swelling of the face and the skin eruptions had disappeared, but there was still some muscular weakness, and a sense of weight and burning at the epigastrium. By the tenth day all these symptoms had disappeared, with the exception of anorexia and heat in the throat. A woman who had a scarlatina-like eruption presented also an enormous œdema of the legs, but without albuminuria. Analysis showed that the arsenic was very unequally distributed in the bread, and thus the variations in the symptoms were explained.

Of these symptoms, certain were so uniform that they were together almost pathognomonic of slight poisoning by arsenic. These were the acceleration of the pulse, the vomiting, the sense of constriction at the temples, the lumbar pain, the weakness in the legs, and the burning in the throat and at the epigastrium. Several symptoms which have found a place in book-descriptions of poisoning by arsenic were not observed, although carefully searched for. There was neither salivation nor continuous spitting, nor hiccough, nor irregularity of pulse. Another local surgeon observed jaundice in one case. The treatment consisted in the administration of magnesia, of milk, and of albuminised water.

A last fact to be mentioned relates to the period of elimination. Little is known on this subject. The period during which the poison is excreted no doubt varies with its dose. Most authors assert that in the dog the elimination is finished in twelve or fifteen days. In one of Dr. FELTZ's cases, the urine, on the thirteenth day, contained no trace of arsenic.

Annotations.

"Ne quid nimis."

"CRUELTY TO WOMEN."

THE retail shopkeepers of the metropolis and others, who conduct the discipline of their establishments on the principle of wilful disregard for the health of their *employées*, are mistaken if they suppose we shall content ourselves with simply drawing attention to the urgent need of seats for shopwomen, and the *cruelty* of keeping these young persons standing "for the sake of appearances." It is our determination to press the demand for this reform until the claims of common humanity are recognised. Customers visiting many of the large houses of business of the metropolis are impressed with the seeming impossibility of finding time for rest. If the subject of this "cruelty to women" is raised, the shop-walkers and managers of departments, both male and female, in the interest of their employers, point to the evidences of their pressure, and aver that, while there is every disposition on their part for the young women to rest, they are unable to do so owing to the stress of business. This is not true. Much of the seeming "business" consists of packing and unpacking, putting things in drawers and taking them out again, to make-believe; and if the shop-walkers saw any of their staff resting—even leaning against the counters,—they would be reprimanded, and even threatened with a fine or dismissal, because they did not, at the expense of health and at the cost of life-long disease and misery, help to keep up the semblance of ceaseless toil. We are watching these establishments very closely, and shall continue to do so until the matter is taken into serious consideration by their proprietors, and seats are provided. Nor will this suffice unless orders are given that the young persons *may* sit, and shop-walkers and managers of departments are forbidden to give contrary orders in private. Ladies will help us by declining to patronise establishments where the cruelty of keeping young women persistently standing during long and weary hours is practised. We have reason to know that some customers who appear to be ladies, but who lack the first quality of their sex—namely, sympathy for evident suffering,—not only support the evil we are trying to put down, but in some instances actually create it by mistaking the pretence of business for the reality, and by needless and even wanton worrying. Such persons discredit humanity. We urgently ask the assistance and personal influence of practitioners in London and throughout the country to put an end to this cruelty to women. During the last week a death has occurred. A young girl committed suicide while in a state of mental derangement—partly, no doubt, induced by standing long hours in a shop. Her hours of work were from 8 A.M. to 9.30 P.M. The master of the establishment in which this girl was employed states that he permits his *employées* to sit or leave the shop "when business allows that indulgence." That means nothing. Business *must* allow such "indulgence," as health, and even life, requires it; and no young female can stand eight or ten hours daily without suffering for it in after-years. The names of the firms from which we have already received intimations that seats are provided are the following: Messrs. Farmer and Rogers, of Regent-street; Mr. Peter Robinson, of Oxford-street; H. Hoadley, of Buckingham-palace-road; and Messrs. Gowans and Goodlet, of Edinburgh. We appeal to the friends of humanity, to ladies who would not be false and cruel to their sex, to support these establishments instead of others, and, we may add, to see that the seats provided *are* used; because it is one thing to put up seats behind the counter on the American system, or to provide chairs, but quite another to sanction or even encourage their use. We venture to hope that during the present season, if all legitimate influences are brought to bear on shop-keepers, the obligations of humanity may be at length, though tardily, fulfilled. We continue to invite communications from firms willing to make the concession, and shall publish their letters and names as they come in.

DIMINISHED DRINK AND ITS SIGNIFICANCE.

OUR contemporaries have all commented on the very pleasing fact of a diminution in the sum spent in 1879 as compared with that spent in 1878 to the extent of fourteen millions, or of nineteen millions as compared with the sum spent on drink in 1876. In 1876 the drink bill was £147,238,760; in 1879 it fell to £128,143,864. Mr. Hoyle, whose statistics are generally accepted, points out that while the consumption of alcoholic liquors in 1879 fell off 9·8 per cent., the consumption of tea increased 2·3 per cent. Mr. Hoyle notices that the judges in Manchester and Liver-

pool have within the last few days congratulated the juries on the great decrease of crime. Manchester and Liverpool are both places where there is an enormous amount of drink taken by all classes, apparently with some belief in its "strengthening" virtues. It is gratifying to see signs of a better state of things. If depressed trade has such beneficial effects, it is almost desirable that it should continue a little longer. It cannot be doubted, however, that increased intelligence as to moral and physical injury done by alcohol is having some effect, and will have more and more. For ourselves we regard the diminished expenditure on drink with unmixed satisfaction, and would like to see it carried much further. We look upon the 128 millions spent on drink as 100 millions worse than wasted. These might be spent on meat, milk, bread, tea and coffee, clothing, and additional cubic space in the poor man's house, with enormous positive advantages in its healthiness and its comforts. When they are spent in drink they are not only not available for such vital purposes, but they go to promote various diseases, notably hepatic and renal disease, gout, tubercle, rheumatism, and dyspepsia. If this Government is not profoundly to disappoint expectation, it will develop boldly and vigorously the legislation initiated by Mr. Bruce (now Lord Aberdare), which, by the concurrent testimony of magistrates, police inspectors, and house-surgeons of hospitals throughout the kingdom, was doing great good. Meantime it will be the wisdom and advantage of every man to make some contribution to the credit of the nation by a judicious consideration of the quantity that he drinks.

STRANGULATED HERNIA.

ALTHOUGH the symptoms of a strangulated hernia are well and generally known, and the correct line of treatment agreed upon by all good practical surgeons, there are one or two points in connexion with the condition on which our knowledge is not so definite or so general as it ought to be. To many, we fear, the main facts appear to be that the hernia when strangulated is irreducible, and that there is obstruction to the onward passage of the intestinal contents. It ought to be hardly necessary to observe that the essential feature of a strangulated hernia is the nipping of the contents of the tumour, with obstruction of the circulation and compression of the nerves of the part. Many attempts have been made to explain the mode of production of the strangulation, and from their language some authors might be supposed to hold that the neck of the sac was the efficient agent; thus "the stricturing neck of the sac" is a phrase we are familiar with. In truth, the neck of the sac is entirely passive, and never really strangulates the hernia. Strangulation is invariably due to the too great bulk of the hernia at the neck, and although a good deal has been written on this point, the simple and true explanation is certainly not generally forthcoming. A hernia may be strangled when first formed, but as a rule it results from some sudden increase in the size of an old rupture. Now, what takes place in the neck of the hernia when from a cough or strain more gut is forced down? It is not that another coil of gut is forced into the sac, and so two coils of intestine are plugging the aperture in which one formerly lay, but that more of the coil of gut originally in the sac is forced down, and what leads to the strangulation is the additional mesentery lying in the neck of the hernia. The size of the ascending and descending gut is the same after as before the strain, but in addition to these, between them at the neck lies the mesentery attached to the herniated gut, and as the length of gut increases, the bulk of this mesentery must also increase, and thus the tightness—the strangulation—is produced. In some cases it is the increased thickness of the pedicle of omentum that causes the strangulation, and there may be other cases again besides those already mentioned, where at its first formation the hernia is strangulated, in which this explanation does not hold good; but we have no doubt that it is true in the large majority of instances. Further, it is the nipping of the pedicle of mesentery that causes the congestion of the whole coil of intestine in the hernial sac, for in it run the vessels. The gut is of course also constricted, the passage of its contents arrested, and then later on ulceration of its walls may ensue. But our present object is to point out that the cause of the tightness is most often the mesentery, and that it is its compression that leads to the interference with the circulation in the whole length of the herniated intestine.

REST AND REPAIR.

IT may be safely assumed that those have been mistaken who supposed that physiological rest consists in inaction, and that repair goes on during quiescence. Nutrition—and, therefore, repair—is the concomitant of exercise. Appetite is one thing, the power to digest food another. A man may feel ravenous, and consume large quantities of material containing the elements of nutriment, but be unable to appropriate the supply furnished, or, in other words, to nourish himself. It is so with rest. Mere inaction may be secured without *rest*, and idleness without the restoration of energy. The faculty of recovery and recuperation after exercise is in direct proportion to the vitality of the organ rested. This faculty is not to be called into action by inactivity! It follows that relief and recovery from the effects of what is improperly called "over-work" cannot be obtained by simply "going away for change" or by indulgence in idleness. A new form of exercise is necessary, and the mode of action chosen must be one that supplies moderate exercise to the very part of the system which it is required to "rest" and restore! Health-seekers often err in trying to recover their powers by simple diversion of energy. It is a popular error to suppose that when the brain is over-worked the muscular system should be exercised by way of counteraction. The part itself must be worked so as to stimulate the faculty of nutrition; but it should be set to fresh work, which will incite the same powers to act in a new direction.

HOSPITAL ADMINISTRATION IN INDIA.

WE have received from the Secretary to the Government of Bengal some additional documents relative to the hospital reforms in Calcutta. These consist of a resolution recorded by the Lieutenant-Governor on the report on the Calcutta Medical Institutions, a letter addressed to the editor of the *Englishman* by Surgeon-General Irving on the retired list, and circulated among the native teachers of medicine in the form of a pamphlet, and a memorandum by Surgeon-General Payne commenting upon that letter. It is unnecessary again to notice in detail the comments made by the Lieutenant-Governor on the extravagant and unsatisfactory manner in which certain of the hospitals appeared to have been conducted. The papers now before us confirm the conclusions at which we arrived from a careful study of the previous papers. Dr. Irving has not, in our opinion, fully made out a case against the authorities, and has, in some respects, placed himself in an unfavourable light. In his letter in the *Englishman* he says: "If it is said that as Surgeon-General I countersigned all contracts in token of approval, I simply retort that I informed superintendents of hospitals to do as they thought best in the matter, they being most really interested in the matter, and that I should agree to what they proposed." Could the Lieutenant-Governor have penned any more severe comment on an officer holding a high administrative appointment than he has done himself? He then adds: "Had I said anything to show that I was not an advocate for 'rigid economy' in the interest of the

tax-payer, I should have been put down as 'disloyal' (a favourite Bengal term), and I should have got into a controversy, for which I had no wish." This explanation does not accord with the line of argument previously adopted by Dr. Irving in defending himself from imputations which he conceived were cast upon him by the committee. He then said: "But if I did 'not put on the screw' and enforce 'rigid economy,' I do not understand the meaning of these words." It is difficult to see how the two statements can be reconciled. But the most extraordinary part of Dr. Irving's last letter is the statement it contains that he never read the report of the committee, though he had to read the resolution of Government upon it. It might have been expected that he would read carefully a report which he seems to have thought unjustly cast blame upon him. Surgeon-General Payne has, in compliance with instructions from the Lieutenant-Governor, answered, we think satisfactorily, the statements in Dr. Irving's letter, and has appended documents in support of his opinion. We cannot approve of an officer, who has held the important position which Dr. Irving did, circulating among the native teachers of medicine a document calculated to bring the authorities into contempt, and to produce dissatisfaction among these teachers and their patients, more particularly when a careful examination of the facts might have created considerable doubts in his own mind as to the accuracy of his conclusions.

EXTRACTING TEETH AND PUTTING THEM BACK IN THE JAW.

WE invite opinions—of course, from qualified surgeons who are engaged in the practice of dentistry—on the subject of tooth extraction and replacement. Under what conditions is it possible to extract the stump of a broken tooth, affix a new crown to it, or otherwise manipulate the structure, perhaps under antiseptic precautions, and to return it to its socket? Of course the nerve connexion must in any such case be destroyed. The question is, we take it, one of vitality in the periosteum of the tooth. Can this be kept alive, say for half an hour; and when the stump is returned will union take place—we mean such union as shall render the replaced tooth practically again part of the organism? or is it simply from this time a foreign substance, which may be tolerated for a considerable period, but will perhaps suddenly become the seat of irritative processes, and need to be removed? If members of our profession—with whom alone we can discuss a question of surgery and physiology—will favour us with concise statements of their opinions on this interesting subject we shall be glad.

SECONDARY HÆMORRHAGE.

THE term "secondary hæmorrhage" is so universally adopted that no change in it would be either desirable or possible; but it is a term which has no clear natural significance, and its exact application is not always so precise as might be wished: thus quite lately we read of so-called "secondary" hæmorrhage occurring a few hours after an operation. When a vessel is wounded or ruptured the loss of blood is at first stopped either naturally or artificially by a means which is merely temporary—a clot of blood or a ligature, for example; this is called the "temporary arrest of hæmorrhage"; but the real cure of the injury is brought about by quite another process, the same in all cases, which leads to the obliteration of the injured vessel—the "permanent arrest of hæmorrhage." If these facts, well known to all, are clearly kept in view, the proper classification of hæmorrhages becomes easy. There never can be any difficulty about the use of the term "primary hæmorrhage." We should restrict the term "intermediary" to hæmorrhages resulting from interference with, or failure of, the temporary arrest of hæmorrhage, as when a ligature slips, or a clot becomes displaced by movement of a part, dilatation of the vessel, or the increased force of the heart's action. And then all hæmorrhage due to failure in the final process—the permanent closure of the vessel—should be called "secondary." This classification is important not only because it is scientific and clearly distinguishes things that differ, but because the treatment of intermediary hæmorrhage differs from that of secondary hæmorrhage in most important particulars. Hitherto surgeons have spoken of bleeding occurring before or after a certain time as intermediary or secondary, apparently ignoring the essential distinction between them, which is not one of time, but of the nature of the efficient cause. So distinct is the difference that in any given case intermediary hæmorrhage does not predispose to, or point to the danger of, secondary hæmorrhage; and the means which is the most certain to prevent intermediary hæmorrhage—a well-applied ligature—is just the one hæmostatic that of all others is attended with secondary bleeding. Such being the case, our distinction is not fanciful, but real; happily, also, it is very simple, and makes the meaning of these well-known terms far more definite and intelligible than that which would make them refer to time only.

FILTHY FROZEN WATER.

THE heat incites to the use of ice as a component part of our daily diet. It will be well to take the precautions necessary to avoid the consumption of filthy frozen water under that name. The difficulty lies in the fact that the freezing process has a tendency to destroy or disguise the familiar tokens of dirt, and, as we know well, the worst forms of filth—namely, the products and propagating materials of disease—are the least recognisable! For purposes of general cleanliness ice should be tested by a strong transmitted light at an oblique angle to the cleavage or stratified structure of the mass. Some specimens thus inspected will be found to bear the appearance of a highly-coloured Cape diamond, and will be readily eschewed.

NOTES OF CLINICAL PRACTICE.

THE ultimate practical purpose of professional journalism is to give those engaged in the daily exercise of the calling represented information which shall be helpful in their labours, and, therefore, conducive to the public good. What can advantage this cause more than the prompt and rigidly accurate noting of the facts observed, knowledge acquired, and experience gained in actual practice? If busy men will jot down the little points that strike them, in their own way, without waiting to elaborate formal papers, and send them direct to this office, we shall be happy to have them collated and presented in a form available for general information. The amount of clinical and pathological material wasted for want of this saving process must be very considerable. It is practically impossible for the great majority of practitioners to write lengthy reports of their cases. They have neither the leisure nor the inclination to do this. Nor are they always able to make the local Societies the medium of communication with the profession, because the reading of a paper necessitates the trouble of first writing it, and then of attending to submit it. There is not opportunity for this performance, and many men shrink from it. Letter-writing is only less troublesome. Our suggestion is that practitioners should simply jot down a note of their observations in any rough fashion that occurs to them, and forward it duly attested. What more may be necessary we will do, in the hope of rescuing a large mass of valuable material from loss, and securing for patient and persevering observers the professional publicity to which their labours justly entitle them.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE annual election for office-bearers will take place on the 7th proximo, when Mr. McClintock will be appointed president, Mr. Chaplin vice-president, and Mr. Colles secretary. For the Council all the outgoing members are candidates for re-election, and in addition five Fellows have come forward for a seat on the Council—viz., Messrs. John Andrew Baker, Austin Meldon, F. Alcock Nixon, Henry Macnaughton Jones, and James Good Curtis.

HORSE-POX.

WE learn that an outbreak of horse-pox (*Variola equina*) has occurred at the west end of London, the nature of the malady having been recognised by Mr. Fleming, who has described it in his "Veterinary Sanitary Science and Police." The affection derives its interest from the fact that it was supposed by Jenner to be the source of cow-pox, and also that it is communicable to mankind, and some other species, by inoculation, producing effects somewhat analogous to those of vaccinia. In the present outbreak several animals have been successfully inoculated; and medical men may be interested to know that the attendant on the diseased horses has accidentally contracted the complaint. Last year, in the Second Life Guards, there was an outbreak of horse-pox among the troopers; and the Farrier-Major was infected, the symptoms resembling those observed in vaccination, as appears in the report of the case published in the *Veterinary Journal* for March. We hear that experiments are being conducted at the Brown Institution with material obtained from the diseased horses in London.

SUNSHADES FOR HANSOMS.

THE inconvenience of holding an umbrella or a sunshade in front of a hansom is very great. Why should not these vehicles be fitted with a light projecting shade like that worn by little children on their bonnets, or the screens sometimes attached to the front of bathing machines, and so worked that it may be under control of the "fare"? Nothing would be easier than to devise such an apparatus. The hood should stand flat back against the front of the hansom when not in use, and it need add nothing to the difficulties of ingress, while it could be made to fall forward at will, sheltering the eyes from the sun in bright weather, or affording protection in rain.

THE summer classes this session at Edinburgh are even more largely attended than last year, and the overcrowding in the botanical class-room once more compels Professor Dickson to lecture twice daily. Over two hundred students took part in the first botanical excursion, and visited the Fife coast between Aberdour and Burntisland. Professor Alleyne Nicholson is acting for Sir Wyville Thomson, who is not yet able to undertake the class-work. In the extra-mural school two new lecturers have qualified—viz., Mr. Geddes in Zoology, and Mr. McAlpine, B.Sc., in Botany.

THE death of Pershouse W. L. Langley, M.D. Q.U.I., M.Ch., of Liverpool, has been announced, under circumstances of more than ordinary sadness. Dr. Langley was but twenty-three years of age, and died of typhus fever contracted in the discharge of his duties as senior resident medical officer of the West Derby Union Hospital. The deceased was the only son of Inspector-General Langley, who held an official post in the Crimea during the war in 1854.

SUMMONSES have been issued for a meeting of the Executive Committee of the General Medical Council on Tuesday, June 15th, 1 P.M.

DR. G. A. KEYWORTH has proposed the application of hot air as a remedy for cancer. By means of a foot-bellows, he drives air through chloride of lime and hot iron tubes, and then forces it against the surface of the diseased growth. The *New York Medical Record* states that the effect is the relief of pain with considerable desiccation of the parts.

THE annual meeting of the Fellows of the Royal College of Surgeons, for the election of four members into the Council of the College, is fixed to be held on Thursday, July 1st, at 2 o'clock P.M. The circulars announcing the meeting are now about being delivered to all the Fellows whose addresses are known at the college.

HIS Excellency the Lord-Lieutenant of Ireland has made the following appointments:—Surgeons in Ordinary: Edward Dillon Mapother, Robert McDonnell. Physicians in Ordinary: George Hatchell, Thomas Nedley, Christopher Nixon. Dentist: Daniel Corbet.

THE managers of the Edinburgh Royal Infirmary will shortly proceed to elect a third assistant physician, in order that the work in the out-patient department and elsewhere may be somewhat lightened, and the teaching power of the staff increased.

PROFESSOR W. H. FLOWER, F.R.S., will distribute the prizes and deliver an address in connexion with the University College Faculty of Medicine, on Wednesday, June 2nd. The Earl of Kimberley will take the chair at 4.30 P.M.

IT is rumoured that during the present session a Bill will be introduced into the House of Commons to grant a Parliamentary representation to the newly-constituted University of Ireland.

THE annual session of the American Medical Association commences on June 1st, at New York.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bradford, Yorkshire (estimated population in 1879, 191,046).—The report of the medical officer of health (Mr. Harris Butterfield) for this important borough during the year 1879 is, for numerous reasons, of peculiar interest. Bradford is the capital of the Yorkshire worsted and stuff district, and it had grown to be a great and densely-populated town before public-health legislation and administration had emerged from their rudimentary state. As a consequence, the sanitary evils and defects which characterised our towns thirty years ago—defects of drainage, defects of water-supply, defects of excrement-disposal, defects of house-accommodation—were to be witnessed in Bradford, and this indeed in a most aggravated form. Bradford at the period referred to was, in respect to one evil only, a hideously-offensive Cyclopean midden-privy fenced in with inhabited dwellings; and its sanitary deficiencies made their unwholesome influence ghastly apparent in its swollen mortality. But things sanitary have changed and are still changing for the better, especially since the appointment of the present able health officer, and a transformation has already been effected in the sanitary conditions of the town which redounds to the credit of the Corporation, and which is of the most gratifying nature, whether regarded in the interests of its population or as encouraging the sanitary authorities of other towns which have to contend with similar difficulties. Last year

the death-rate of Bradford (21·1 per 1000 of population), Mr. Butterfield tells us, was "the lowest ever recorded in Bradford, and 3·1 below the average of the six preceding years." Moreover, none of the large manufacturing towns had a death-rate so low as that of Bradford. The diminution of mortality was particularly noted in the disease most likely to be influenced by sanitary and social causes. Infantile mortality, calculated on the proportion of deaths to births, has declined from 20·5 in 1873 to 15·2 in the present year, while there is a marked diminution in the number of deaths from tubercular diseases, the convulsive diseases of infants, and from "fever" and diarrhœa. Glancing at the particular subjects dealt with in the report in the order they are given, we note first an outbreak of *small-pox*, which is of interest on two accounts, first with reference to its particular source, and next with reference to the measures by which it was extinguished. The person first attacked was engaged in sorting rags, a large portion of which had come from London, and it is believed she contracted the disease from infected portions among them. Other persons engaged in the same occupation were also attacked with the disease. These persons were at once removed to the infectious-disease hospital of the borough, vaccination and revaccination, with disinfectants, diligently used in the infected families, and the spread of the disease beyond a few scattered cases stayed. This was not a solitary instance during the year of the arrest of small-pox infection by the Corporation having at command, in the fever hospital, the means for immediate isolation. *Measles*, as usual, from the early stage of its infectiousness, and the trivial light in which it is too commonly regarded, foiled the efforts of the sanitary authority in endeavouring to arrest its spread; but in respect to *scarlet fever* Mr. Butterfield is able to make the following important and encouraging statement:—"The most hopeful circumstance in the preventive treatment of the disease is the increasing popularity of the Fever Hospital, which last year admitted 157 cases, many of them being private patients." The following is, moreover, of much practical interest:—"In many cases where mothers were unwilling to part with their children at the outset of the disease, the patients have been sent to the hospital when convalescence was established. Instead of being isolated in one room for three or four weeks during the process of desquamation they are allowed at the hospital to play in the grounds, and have companionship and amusement, as well as medical supervision, careful nursing, wholesome diet, and abundant ablutions." Mr. Butterfield recounts an interesting outbreak of diphtheria, in which the disease appears to have been determined by the use of milk from a dairy where diphtheria existed. The conditions under which the milk was exposed to infection deserve quotation. The milk-cans, which were found dirty, "were kept in a scullery or wash-kitchen, in which was a sink with an untrapped pipe. Under this sink was a chamber utensil containing excreta. Near the milk-cans was a washtub half full of dirty water, and resting on the milk-cans were two bundles of dirty linen from the bed and person of the infected child." The report gives most interesting information as to the diminution of "fever" and diarrhœa in the town following upon improvements in drainage and privy arrangements. During the period 1870-74 the deaths from "fever" and "diarrhœa" were respectively 689 and 1106. During the period 1875-79 they had fallen to 323 and 830. But if much has been done to improve the sanitary condition of Bradford in respect to water-supply, drainage, and excrement disposal, much detailed sanitary work still remains to be done. But we may take assurance that a Corporation which has done so much will not halt in its course until it has done all that is needed.

East Grinstead (estimated population, 16,500).—Dr. Fussell, reporting to the Rural Sanitary Authority of this district, gives a birth-rate of 36·0 per 1000 population, and a death-rate of 17·21 for the year 1879, in the combination of which it forms a part. The death-rate ranged in the different parts of the combination from 0·4 per 1000 population (Lindfield Urban) to 19·2. No very noteworthy health-disturbance chequered the course of the year, and the sanitary administration had a pretty even path throughout. Scarlet fever did little mischief, and there were but three or four cases of typhoid fever throughout the district. Several cases of small-pox occurred among a body of excavators engaged in railway construction, which was successfully combated and confined to this body of labourers by isolation. The contractors for the works provided huts for the hospital accommodation and isolation of the men seized with the disease. Dr. Fussell notes another instance of the value of having hospital accommodation at hand for the isolation of first cases of infectious disease—an imported case of small-pox, which it was possible to deal with immediately by isolation, and which did not give rise to any other case. Dr. Fussell adverts to a communication from the Local Government Board asking for information as to the hospital accommodation possessed by sanitary authorities in his district for isolating cases of infectious diseases. He appears to think that the accommodation possessed by the Board of Guardians at the workhouse is amply sufficient for the wants of the district, but we imagine that Poor-law hospital accommodation will not be held by the Local Government Board as meeting the wants of sanitary authorities. He mentions the great advantages which have been derived by the district from the access had to the *fever wing* of the County Hospital in Brighton through subscribers. A system of drainage is nearly completed in East Grinstead, and schemes of drainage are under consideration for other parts of the district.

Scarborough (estimated population, 30,000).—Dr. Taylor's report on the health of this important seaside-resort as yet has only reached us in abstract, as given in the local journals. Is it possible that a town of this importance does not print the annual report of its medical officer of health? The abstract, with the comments of the abstracter, gives a highly favourable report of the health-condition of the place during 1879, but we are unable to form an independent judgment of the subject in the absence of the detailed report. The Corporation has not the highest reputation for the exercise of care in attention to the health-requirements of the town in the interest of its population and visitors, and that no little leaven of apathy in these matters still exists with the local authority is to be inferred from certain comments of Dr. Taylor. He speaks of "many" back-roads, lanes, and semi-public thoroughfares presenting "Augean nuisances that require Herculean determination to remove"; and he tells of nearly twenty back-passages that were reported to be in a filthy condition so far back as the year 1875, and which, although they have been reported to the Corporation annually since that time, remain filthy still. "Surely," writes Dr. Taylor, "the sanitary committee must wink at the reports of their officers, or there could not be room for such a statement." The death-rate for 1879 is stated to have been 20·17 per 1000 population.

THE HOUSING IN SUBURBAN LONDON.

"We find vast numbers of houses being built with drainage into cesspools, the drains themselves utterly unventilated and unprovided with any means for preventing the entry thereto of cesspool-air or sewer-air; soil-pipes unventilated, sink-pipes directly connected with drains, foundations hopelessly damp, and so forth. We find the majority of the sewers are unventilated, and the ditches and watercourses turned into vast receptacles for decomposing filth." We quote these words from a letter printed in the columns of the *Willesden Chronicle*, and signed "P. Gordon Smith,"—in other words, we surmise, the Architect of the Local Government Board. The words refer to the dwelling-houses springing up "by leaps and bounds" in the north-western suburbs of London, but they apply equally to new houses in other suburbs where bye-laws for the regulation of certain structural details of new buildings are not in force. The statements quoted come with particular force from Mr. Gordon Smith. He has written them in warning to the Local Board of Willesden, the district in which he lives, of the sanitary evils they are permitting to grow up around them, and which must prove increasingly dangerous to the community. The mischief already done can only in part be undone; but the sanitary authority may, if it think fit, put a stop to the further creation of evils of the sort referred to, if it adopt and put in force bye-laws for the regulation of the structural arrangements of new buildings, as the law provides—that is to say, if they proceed to lock the door after the first horses of the stud have been stolen. Mr. Gordon Smith's letter is intended for the special enlightenment of a particular suburb; but it conveys a much wider and, we may say, graver lesson, which we have often had to urge upon our readers. It furnishes another and most striking illustration of that feature of sanitary legislative policy to which we gave particular notice in THE LANCET of the 15th instant, under the name of "Partingtonianism"—a policy which does not interpose any effectual barrier to the growth in new centres of population of the very evils which it is the

express purpose of the public-health law to remove. Sanitary law is too generally powerless in these new centres until the evils which it was devised to obviate have been first created. It substitutes for the adage "Prevention is better than cure," the maxim "Cure is better than prevention." Mr. Dodson and the present Government have an enviable chance of purging sanitary law wholly of this mischievous absurdity, and of getting it into a straighter course.

THE REGISTRATION OF DISEASE: PROSECUTION.

On the 10th inst. Dr. David Robertson, of Moldgreen, Huddersfield, was charged with having, contrary to the provisions of the Huddersfield Waterworks Improvement Act, 1876, failed to report a certain case of infectious disease in a habitation where there was not sufficient accommodation for enabling the case to be properly attended to, so as to prevent the spread of the disease and the proper treatment thereof. The case, one of scarlet fever, happened to be in the house of a milk-dealer, who sold in bulk, not in retail. A first case was followed by a second in the dealer's house, both being children of his, and were attended by his wife. No question appears to have arisen as to the sufficiency of space in the house for the isolation of the children from the family; but the medical officer of health and the sanitary inspector for the borough tendered evidence to show that milk sold from the house, under the circumstances of the treatment and attendance upon the cases there, was liable to become infected with the contagion of scarlet fever. Dr. Robertson observed in his defence that he should have reported the first case had he thought it necessary to do so; but if he had to report every case of contagious disease where he thought there was a deficiency of accommodation nine out of ten of the cases in Moldgreen would have to be taken to hospitals. The magistrates adopted the view of the medical officer of health, and inflicted upon Dr. Robertson a nominal penalty of five shillings and the expenses.

As this case is reported in the local journals it does not give the impression that the action of the Corporation was judicious. Either the Corporation should take the entire responsibility of determining whether infectious cases are properly or improperly lodged, and cause every case to be reported to them; or they should issue definite instructions as to what they are prepared to consider proper or improper lodgment to be. It is intolerable that the judgment of the medical man, who is responsible for the treatment of a case, should be subject to being traversed unexpectedly and unpleasantly, as Dr. Robertson's has been. This is not the first time, if we mistake not, that the Huddersfield Corporation has been brought into collision with the medical profession there by its ill-considered administration of the provisions of their Improvement Act relating to infectious diseases. Has Huddersfield any hospital provision for infectious diseases? Or is it one of those local authorities which shows itself active in imposing duties upon others while neglecting to fulfil a primary duty as to the limitation of infectious diseases within its own limits?

"EXECRABLE" HOUSE DRAINAGE IN THE METROPOLIS.

"The execrable drainage arrangements" of many of the new houses built within the metropolitan area are, so to speak, a standing theme of animadversion among Londoners; but the subject, notwitstanding its importance, has never induced among the populations of the different sanitary districts of the metropolis such an amount of interest as would lead to concerted action for its amendment. Mr. Charles Campbell, of Cromwell-road, Kensington, has recently endeavoured to arouse public attention to it by recounting his experience of the subject, as a resident and vestryman of the district in which he lives, and he has done so in a fashion which ought to awake sounder thought on the matter than is too commonly the case. He justly regards the careless, ignorant, and scamping doings of the builders in regard to house-drainage as simply an indication of a deeper and more serious evil; he finds that the sanitary authorities in the metropolis have no lack of power to remedy the mischief of which he complains, so far as legislation is concerned; and he justly seeks an explanation of the whole matter in the apathy and carelessness of the authorities referred to with regard to this subject. The large powers which the Legislature has given to the metropolitan sanitary authorities in reference to the drainage arrangements of houses have been and are being, suffered to remain very largely a dead-letter. They are powers which experience has long taught cannot be efficiently exercised without bye-laws, and we are unaware of a single sanitary authority in the metropolis which has framed a code of bye-laws regulating these arrangements in definitive terms. The exclusion of the metropolitan sanitary administration from the general public-health legislation of the kingdom, and its freedom from all proper supervision as to the mode of performance of its health-functions by being placed in relation with the Home Office (which has no health-functions and no means of supervising them), instead of with the Local Government Board (which has health-functions and the means of supervision), have exercised and still exercise a disastrous influence on the health-welfare, present and future, of the metropolitan population. Until the sanitary administration of the metropolis is more closely approximated to that of other urban districts of the kingdom, anomalies of the nature pointed out by Mr. Campbell will continue to exist, and the metropolitan populations to suffer from them.

GOVERNMENT CONTROL.

Recent writers in *The Times* have been making known their griefs as to the interposition of Government control in affairs concerning local administration. Their complaints relate wholly to matters which come under the control of the Local Government Board, and betray a painful degree of irritation with the mode in which the inspectorial functions of that Board are carried out. The writers, unfortunately, do not distinguish between the *manner* in which control is exercised by the Local Government Board, and which solely concerns that Board, and the *matters* to which that control refers, which are appointed by the Legislature, and which can alone be dealt with by the Legislature. It would be an ill day for England and for the English ratepayer if local authorities were permitted to exercise that unchecked freedom in local government for which these writers contend. Taking sanitary matters alone there is too good reason to believe that money borrowed on easy terms from the Government for the purpose of executing sanitary works has, notwithstanding existing checks on expenditure by the Local Government Board, been wastefully expended both in a pecuniary and in a sanitary sense; while the plea that a local authority can best appreciate and has the completest knowledge of what is needed for its own district, too often proves to be a plea for the exercise of local ignorance, uncontrolled by the wider knowledge which may be obtained by comparing the experiences of various localities. But considerations of this sort apart, the indications are too numerous and significant of a widening discontent against the inspectorial and general system of the Local Government Board, which cannot fail to be seriously detrimental to the influence that Board ought to exercise upon local authorities, and which must operate most prejudicially against the "educational" functions of the Board. We predicted this result when Mr. Stansfeld determined at all hazards to frame the administration of the Local Government Board upon the traditions and practice of the old Poor-law Board, and we regret to find that this prediction is being fulfilled. The subject deserves the grave attention of that Board.

INFECTIOUS DISEASES HOSPITALS AND ZYMOTIC FATALITY.

The medical officer of health for the City of Bristol, in his Quarterly Return for the past three months of this year enunciates that scarlet fever is "of all the zymotic diseases the most intractable," and adds, "sanitary authorities and their officers may fight with it, postpone its visitations, gain victories in skirmishes with it, but in the long run it holds its own sway, deriving its strength from the ignorance and the fatalistic beliefs of the public." We would not wish to deny that there is much truth in Mr. David Davies's remarks; but when we read in his report that during last quarter only one patient was admitted to the Fever Hospital we beg leave to doubt whether the sanitary authority and their officers in Bristol have done their best to fight scarlet fever with the weapons they have at command. In the Bedminster sub-district of Bristol 45 fatal cases of scarlet fever were recorded during the last quarter of 1879, and in the first three months of this year 41 more fatal cases were recorded. Thus during six months scarlet fever has held its sway in Bedminster, and no successful efforts have been made to control the prevalence and fatality of the disease by turning the city hospital accommodation to account for isolation purposes. It would be interesting if

Mr. Davies could explain to us why hospital isolation of scarlet fever is comparatively a dead letter in Bristol, whereas in London, Birmingham, and Salford the medical officers of health have been able to turn the hospital accommodation provided for the isolation and treatment of zymotic diseases to excellent account. Dr. Hill, the medical officer of health for Birmingham, in his report for the first quarter of this year records the fact that 45 cases of scarlet fever were admitted into the Birmingham Borough Hospital, while the number of cases of this disease admitted to this institution during 1878 and 1879 were 424 and 184 respectively. Bristol is well provided with hospital accommodation for infectious diseases, but this accommodation will be powerless to control the prevalence of such a disease as scarlet fever unless its value be recognised and the hospital utilised.

LONDON STINKS.

Attention has at length been drawn in the daily press to the disgusting smells pervading many of the principal London streets at the present moment. A correspondent likens the smell in Victoria-street, Westminster, to that of a charnel-house, and the smell in the Quadrant, Regent-street, on Friday and Saturday last was so like that of carrion, that we heard the question debated whether it did not come from some open windows in the houses near the spot where it was felt, and might not arise from some, perhaps unknown, carrion there. But this is not the only part of Regent-street which has recently been distinguished by a foul smell. The stench (arising from stagnant sewage according to some, from foulness of the roadway according to others) has been specially obvious to the passer-by about the centre of the street, and between Oxford-circus and Margaret-street. In the latter place it was particularly disgusting on Saturday evening. Other streets in the West of London have, and are, suffering from persisting stink. It has been suggested that this offensive state of things has arisen from the long spell of dry weather, and consequent insufficient flushing of the sewers or streets or both. But are the sanitary authorities of the metropolis so wanting in ingenuity, energy, and means that the effects of absence of rain upon the sewers and streets at this time of the year cannot be counteracted.

The first prosecution under the section of the Blackburn Improvement Act, which requires every medical practitioner within the borough to report to the local authority certain specified infectious diseases under a penalty in default thereof, came on for hearing before the magistrates on the 12th inst. Mr. Cort, the medical man against whom the prosecution was instituted, was charged, upon the evidence of a death certificate given by him, with having neglected to comply with the section referred to. The certificate related to a patient—a child—Mr. Cort had been called to five days before it died, and when, we are given to understand, it was suffering from laryngitis. There had been previous illness, it seems, before Mr. Cort saw the case, extending over nine days, for which medical aid had not been sought, and which he came to the conclusion had been scarlet fever. The state of the case when he first saw it was such that he did not consider it necessary to report to the local authority; but holding the laryngitis as a sequel to the scarlet fever he certified that disease as a cause of death. The magistrates convicted Mr. Cort, and imposed upon him a fine of ten shillings with costs. Mr. Cort was not represented in court by a solicitor. The case has caused a good deal of irritation among the members of the profession in Blackburn. A correspondent writes to us: "If the Corporate authorities of Blackburn wish to have the cordial co-operation of the medical men in the town, they will have to administer their newly-acquired powers in a very different spirit to that shown in this prosecution of Mr. Cort; the more especially as there have already occurred cases in which the authorities and the medical men of the town have been brought into antagonism. One medical man who has hitherto reported all cases referred to in the Act has determined that he will report no more, holding that prosecution and fine will be a source of less irritation and annoyance than reporting as it now has to be carried out."

As an example of the state of things which exists in Willesden, and of the sort of intelligence (?) which governs sanitary proceedings there, we may mention that at a recent meeting of the local board complaint was made of an "abominable stench" issuing from a sewer ventilator. The surveyor attributed this to stagnant sewage in some of the house drains connected with the sewers—in other words, complained that the house drains were polluting the sewer and the sewer-air. Whereupon a member of the board stated that, after standing over the grating of the offensive ventilator for a minute or two, he had had to keep in-doors for two days suffering from a bad throat, and he added "he thought the ventilator should be at once stopped up." To this the Board's surveyor immediately responded "It is" (!). One voice only appears to have protested against this course, and the Board constituted for the sanitary safeguard of the population seems to have assented to a measure which would subject the inhabitants of the houses connected with the section of sewer where the offensive ventilator existed to the imminent risk of poisoning by sewer-air forced back from the sewer and drains into their dwellings.

It may be useful to note that at a recent meeting of the Hayton-with-Roby Local Board, a claim was made upon the Board for £10, as the cost of a bed ordered to be destroyed by the medical officer of health. The bed, a new feather one, had been occupied for a month by a patient suffering from scarlet fever, and the medical officer of health, in the exercise of a discretion given to him by the Board, ordered its destruction as the only feasible means of disinfection. The bed was the property of a well-to-do ratepayer, and the Board took exception to a claim from such a source as well as to the amount claimed. The clerk of the Board thought that the medical officer of health had perhaps been a little hasty in ordering the destruction of the bed, but he held that compensation must be given to the proprietor; and it was decided that an endeavour should be made to come to an arrangement with him which would be less heavy upon the ratepayers.

A committee was appointed at a meeting of medical men held in the Perth Infirmary last week to wait on the police commissioners to advise with them on the whole subject of the public health. From the statement of several gentlemen present at the meeting, the sanitary condition of Perth would appear to be far from satisfactory. Excessive sickness and a high death-rate were attributed to pollution of the water-supply and serious defects in the drainage of the city.

The Town Council of Oswestry have determined to oppose the Bill introduced into Parliament by the Town Council of Liverpool for supplementing the water-supply of the latter town with water taken from the river Vyrnwy, unless clauses are included in the Bill which would permit Oswestry and other towns along the course of the Liverpool main to have water from it.

The report of the medical officer of health for Plymouth for the week ending the 22nd May records only two deaths from measles. This would indicate that the epidemic of this disease which has been so severe in this district is coming to an end.

The Runcorn Rural Sanitary Authority has received the sanction of the Local Government Board for borrowing the sum of £2921 for sewerage works in the township of Appleton.

Scarlatina has been very prevalent in New Swindon and its neighbourhood, but is now declining.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

THE death-rate in our large towns continues to decline, and was lower last week than in any week since the middle of October last. In twenty of the largest English towns, estimated to contain in the middle of this year seven a half millions of persons, or nearly one-third of the entire population of England and Wales, 4760 births and 2949 deaths were registered last week. The births were 425, and the deaths 326, below the average weekly numbers during 1879. The deaths showed a further decline of 80 from the numbers returned in recent weeks, and were equal to an annual rate of 20·5 per 1000, against 21·2 and 21·1 in the two preceding weeks. During the past seven weeks of the current quarter the death-rate in these towns averaged only 21·5 per 1000, against 24·0 and 24·4 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 14·4 in Portsmouth, 18·1 in Leicester, 18·5 in London, 18·5 in Brighton, and 18·6 in Bristol. The

rates in the other towns ranged upwards to 23·7 in Sunderland and Plymouth, 24·9 in Norwich, 26·6 in Manchester, 29·8 in Salford, and 29·9 in Liverpool. The high rate in Salford was mainly due to zymotic fatality, while that in Liverpool was in great measure caused by excessive infant mortality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 443 and 439 in the two preceding weeks, further declined to 400 last week, and were fewer than in any week since July last; they included 128 from whooping-cough, 96 from scarlet fever, 69 from measles, and 44 from fever, principally enteric. The annual death-rate from those seven diseases averaged 2·8 per 1000 in the twenty towns, and ranged from 1·5 in Birmingham, and 1·6 both in Portsmouth and Leicester, to 5·8 and 6·5 respectively in Sunderland and Salford. Measles showed the largest proportional fatality in Sunderland, Hull, and Nottingham; this disease caused but two deaths last week in Plymouth, whereas the number of fatal cases in the six preceding weeks had averaged 20. Scarlet fever showed excessive fatality in Salford and Norwich; and fever (mainly enteric) in Manchester, Salford, and Sunderland. Fever caused 18 deaths in London last week, against 26 in the nineteen large provincial towns, which have an aggregate population differing but slightly from that of the metropolis. Ten fatal cases of small-pox were recorded in London and one in Birmingham, but not one in any of the eighteen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 186 and 193 at the end of the two preceding weeks, further rose to 196 on Saturday last; 45 new cases were admitted to these hospitals during last week, against 43 and 36 in the two previous weeks.

The fatality of lung diseases showed a decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 260, 280, and 286 in the three preceding weeks, declined to 241 last week, and were 27 below the corrected average for the corresponding week in the past ten years; 131 resulted from bronchitis, and 66 from pneumonia. The annual death-rate from diseases of this class did not exceed 3·4 per 1000 in London last week, whereas the rate from the same diseases was equal to 6·8 in Liverpool, and 7·9 in Manchester.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 23·7 per 1000, against 24·8 in the preceding week; it exceeded, however, by 3·2, or nearly 16 per cent., the average rate in the twenty large English towns. The ratio in the eight Scotch towns last week ranged from 18·6 and 21·6 in Aberdeen and Greenock to 37·2 and 48·7 in Paisley and Perth. The deaths referred to the seven principal zymotic diseases in the eight towns were 127 last week, of which 49 resulted from whooping-cough, 24 from fever, and 22 from diarrhœa. The annual death-rate from these diseases averaged 5·1 per 1000 in the eight towns, whereas in the twenty English towns it did not exceed 2·8; the zymotic death-rate, which was but 1·9 and 3·0 in Greenock and Paisley, ranged upwards in the other towns to 7·8 and 10·6 in Perth and Paisley. Most of the deaths from whooping-cough occurred in Glasgow, Edinburgh, and Paisley; fever was proportionally most fatal in Glasgow and Paisley, but the deaths from this cause in Glasgow showed a marked decline from those in the previous week. The excessive fatality of diarrhœa is a noticeable feature in the zymotic death-rate of the Scotch towns. The 23 deaths referred to this cause in the eight Scotch towns last week was equal to an annual rate of 0·93 per 1000, while in the English towns it did not exceed 0·28, or little more than a quarter of the rate that prevailed in the Scotch towns. In Perth diarrhœa has been prevalent in an epidemic form for some weeks. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 131 and 118 in the two preceding weeks, further declined to 103 last week, and were equal to an annual rate of 4·2 per 1000, against 2·9 from the same diseases in London.

INFANT MORTALITY IN SUNDERLAND.

Most medical officers of health now devote a portion of their annual reports to the consideration of infant mortality. It is, however, much to be regretted that a greater uniformity does not prevail in the statistical treatment of the subject. In the first place the term "infant mortality" is used by most medical officers to signify the death-rate of infants under one year of age, while some others apply it to the rate of mortality among children aged under five years. There is a manifest convenience in applying the term "infancy" solely to the first year of life, and this use of the term is now so general in mortality statistics that we venture to suggest its uniform adoption. Dr. Yeld, in his Sunderland report for the year 1879, uses the term "infant mortality" with reference to the death-rate of children under five years of age, and appears to give no statistics of true infant mortality—namely, of children in the first year of life. Dr. Yeld, moreover, does not treat the mortality of children under five years of age in a scientific manner. The only true and satisfactory method of calculating the rate of mortality at any group of ages is to give the proportion of deaths to persons living at such group of ages. Dr. Yeld, however, attempts to measure the death-rate among children under five years of age in Sunderland by stating their proportion to persons living at all ages. This method yields entirely fallacious results on account of the variations in the birth-rates (and hence of the proportion of children in the population) in the several registration sub-districts of the borough. Thus, by this method, Dr. Yeld arrives at the conclusion that infant mortality (meaning the deaths of children under five years of age) was lowest in Sunderland parish, and highest in North Bishop-Wearmouth sub-district; whereas the rates correctly calculated would show an exactly opposite result, and the close connexion which he notices between the high birth-rate and a correspondingly heavy death-rate amongst children has no real existence. The proportion of deaths under one year to births in Sunderland parish last year was 190 per 1000, whereas it did not exceed 115 in North Bishop-Wearmouth. True, infant mortality is low in Sunderland, and during 1879 the proportion of deaths under one year to 1000 births did not exceed 133, whereas it averaged 151 per 1000 in twenty of the largest English towns; the lowest rates of infant mortality among these twenty towns last year were 113 and 129 per 1000 in Portsmouth and Brighton, whereas they ranged upwards to 170 and 185 respectively in Salford and Leicester.

PORTUGUESE MORTALITY STATISTICS.

Spain and Portugal have hitherto been behindhand in the matter of vital statistics, which is the more to be regretted since such information as is available points conclusively to high rates of mortality in both these countries, and trustworthy mortality statistics are almost necessarily the first steps in the direction of sanitary progress. Very recently, however, both countries have showed signs of following the example of the rest of civilised Europe in the publication of official mortality returns. Spain began last September to issue a monthly return of vital statistics for the entire kingdom; we have, however, only seen the first three of these returns, and we are unaware whether their publication has been continued. We hear, moreover, that a system of weekly and monthly statistics for the whole of Portugal has been inaugurated. We have been, however, up to the present time unable to obtain a copy of any of these returns. We have received a copy of a carefully compiled diagram of the mortality in the city of Lisbon during the forty-five years 1834 to 1878. Marginal notes to this diagram show that at the first official census in 1864 the population of the city was 155,346 persons; while at the second enumeration on 1st Jan., 1878, the population had increased to 203,681. From the recorded number of burials in the two city cemeteries, it appears that the average annual number of deaths in Lisbon during the fifteen years 1864 to 1878 was 6401; and taking the mean population of the city during these fifteen years to be 179,514, it follows that the annual rate of mortality in the city was equal to 35·7 per 1000 during that period. Such a death-rate affords conclusive evidence of low sanitary condition. We also have before us monthly returns for the city of Oporto relating to the first eight weeks of this year, ending on 21st February. The population of the city and its suburbs is stated to be 108,346 persons, and the 725 deaths reported in this period of eight weeks were equal to an annual rate of no less than 43·6 per 1000 of the population. Judged by its mortality statistics (although those available relate to the winter season, when the death-rate usually shows a marked excess) it appears improbable that the sanitary condition of

Oporto is in any way superior to that of Lisbon, where the annual death-rate has averaged 35·7 per 1000 during the past fifteen years. We doubt not that the publication of these mortality statistics, if continued, will soon lead to sanitary reforms, as has been the case in most of the other European cities in which similar returns are published.

THE HEALTH OF DUBLIN.

The 206 deaths in Dublin last week showed a further decline from recent weekly numbers, but were equal to the annual rate of 34·2 per 1000. In the three preceding weeks the rate had been equal to 38·3, 36·5, and 35·0. The deaths included 40 which were referred to the seven principal zymotic diseases, against 57 and 43 in the two previous weeks; 14 resulted from scarlet fever, 9 from small-pox, 9 from whooping-cough, 6 from fever, and 2 from measles. The annual death-rate from these seven diseases was equal to 6·6 per 1000, against 2·8 in London, and 6·6 in Edinburgh.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

ON THE DISSEMINATION OF SMALL-POX AND OTHER INFECTIOUS DISEASES FROM HOSPITALS.

The discussion as to the influence of hospitals specially designed for small-pox in determining an exceptional prevalence of the disease in dwellings in their neighbourhood, which has so long agitated the population of London, is now beginning to occupy the attention of the population of Paris. In London the discussion arose out of the fears of the people living in the neighbourhood of our small-pox hospitals, and from the belief, not without some warranty, that small-pox was unduly prevalent in the neighbourhood of the hospitals, and that this prevalence arose from a diffusion of the contagion from the hospital through the atmosphere. This belief has not been accepted by the members of the profession best able to judge of the facts of the case, and any exceptional prevalence of small-pox in the vicinity of a hospital has been explained in a way very different from that which was in popular favour. Strange to say, the subject has been given prominence in Paris not by the people, but by members of the medical profession, and in regard to it they have adopted not the medical view of the matter commonly held in England, but a view which is the counterpart of the popular one here. This curious anomaly demands some consideration, especially with the object of ascertaining how the medical profession on both sides of the Channel come to be so strangely at cross-purposes on a subject which ought not to permit of a radical difference of opinion. The question was raised by Dr. Bertillon, in a paper read at the last meeting of the French Society of Public Health on the 28th ult., and which was entitled "On a Mode of Propagation of Small-pox and Diphtheria (diffusion of diseases in the neighbourhood of hospitals)." Dr. Bertillon has had recent occasion of studying the distribution of the mortality for small-pox in Paris. In the course of this study he found an exceptional grouping of the mortality in the vicinity of the Sorbonne, and subsequently discovered that this grouping was contiguous to an *annexe* in the Hôtel Dieu devoted to small-pox. Acting upon this hint he studied the grouping of the small-pox mortality in relation to other hospitals, Saint-Antoine and Sainte-Eugénie, receiving small-pox cases, and found a like grouping round about Saint-Antoine as he had found about the Hôtel Dieu, but not about Sainte-Eugénie. But although he did not find an excess of mortality from small-pox round about Sainte-Eugénie, he found an excess of deaths from diphtheria, and this hospital has a special service for that disease. Dr. Bertillon assumes as a mere matter of course, not calling for particular inquiry, that an excess of infectious disease in the vicinity of a hospital receiving wholly or chiefly cases of the special infection must be due to diffusion of the infection through the atmosphere from the hospital to neighbouring houses. He does not stop for a moment to examine whether such diffusion of the contagion through the atmosphere is the ordinary or even an occasional mode of the dissemination of small-pox under circumstances of closer relation of the disease to the uninfected than can well obtain in the relation of hospitals to houses in their neighbourhood. He has not held it necessary to endeavour to eliminate the part which the circumstances ordinarily concerned in the dissemination of small-pox have played in the particular local prevalence he refers to, before attempting to estimate the part (if any) the hospital may have played in it, but simply jumps at the conclusion. He does that, indeed, which popular feeling in this metropolis has done in respect to small-pox, and his conclusion has no higher value. Seeking to explain the different incidence of the small-pox mortality in the vicinity of the Hôtel Dieu and Saint-Antoine, he speaks of the overcrowded and ill-adapted wards set apart for small-pox in the former, and the tall, crowded houses hemming them close in, packed with a miserable population, and the greater space with the wealthier population, about the latter. He notes also the still wider space about Sainte-Eugénie, and the single-storied buildings devoted to infectious diseases there. But from beginning to end he gives no indications of those detailed inquiries into the spread of infection, which should alone be accepted as of value in a discussion of this sort. He does not even tell us whether small-pox began in the hospitals first, or in their neighbourhood—he gives no indication, in fact, whether the hospitals infected the neighbourhood, or the neighbourhood the hospitals, not seeing apparently that the question is cardinal in the discussion. Curious to say, in the discussion which followed the reading of the paper, and in which Dr. Brouardel, Dr. Vidal, Dr. Léon Colin, and Dr. Blondeau took part, the fallacies we have referred to were not even mentioned. Dr. Bertillon's observations as to diphtheria have no greater value than his observations as to small-pox.

VACCINATION IN SCOTLAND IN 1878.

The Registrar-General of Scotland has just issued his fifteenth annual report on vaccination; it relates to children born in Scotland during 1878. It appears that during that year 88 per cent. of the 126,854 children whose births were registered in Scotland during 1878, were successfully vaccinated in accordance with the Act. In 1·3 per cent. of the cases the children were either pronounced by the public vaccinators to be "insusceptible," or vaccination was postponed on the production of medical authority. In 2460, or 1·9 per cent. of the cases, the children had removed with their parents or guardians from the district in which their births were recorded. Dr. Robertson estimates that rather more than two per cent. of the children born in Scotland during 1878 "are possibly still unvaccinated." During the periods when small-pox is not prevalent these unvaccinated children are accumulating in numbers from year to year, and constitute a source of danger to each other and to the country at large. The desirability of assimilating the laws of vaccination in England and Scotland is urged by Dr. Robertson; especially is it recommended that the period during which parents and guardians are at present permitted to postpone the vaccination of their children should be abridged so as to correspond with that which prevails in England. Notwithstanding, however, the increased difficulties in the way of carrying out the vaccination laws in Scotland, due to the period allowed for vaccination being six months instead of three as in England, the proportion of successfully vaccinated children is larger in Scotland than in England. This success of the vaccination laws in Scotland is attributed by Dr. Robertson "to the happy exemption from the delusions of anti-vaccinators which Scotland enjoys." The deaths from small-pox in Scotland during 1878 and 1879 were but 6 and 8 respectively; in the six preceding years the deaths from this disease declined from 2446 to 35. The influence of vaccination as a protection from small-pox may further be inferred from the fact that during the ten years—1855 to 1864—no less than 75 per cent. of the deaths from small-pox occurred among children under five years of age, whereas in the ten years 1865 to 1874, under the operation of the Vaccination Act, the percentage of fatal cases under five years of age declined to 28 per cent.

FEVER PATIENTS.

The Times has given place to another spasmodic outcry for provision for the isolation of fever cases among the well-to-do classes. The writer draws the usual picture from imagination of the numerous people who would gladly hail such provision and willingly pay for it, and suggests that a block of St. Thomas's Hospital might be set aside for the purpose. The trustees of St. Thomas's, we apprehend, will be guided by experience in such a matter, and not by fancy; and experience teaches that even the modest, but admirable, accommodation for paying patients at the London Fever Hos-

pital is more than even the vast well-to-do population of the metropolis is prepared, at present, to make use of. Although *The Times* itself and the greater number of the London daily journals have exerted themselves to make the merits of this institution known, in the sense in which the recent correspondent of *The Times* writes, it is obvious from his letter how little impression their advocacy has made upon the dense ignorance of the educated people of the metropolis in the matter. Less than five years ago so unpromising was the look-out of the Fever hospital with regard to the appreciation of its objects by the very class of persons now represented as craving for such an institution, that it was seriously proposed to close it and sell the property. This ending was obviated in some way or other, and since then there have been indications that the objects of the hospital, particularly in respect to its offering immediate means of isolation in infectious diseases for people able to pay for treatment there, are being better understood. But the fact still remains that this admirable institution, officered by a distinguished medical staff, offers more accommodation for fever cases for the class of well-to-do persons in the metropolis than has yet been called for.

HEALTH OF CALCUTTA.

Surgeon-Major Dr. K. M'Leod, who succeeded Dr. Payne as health officer for Calcutta, has been called upon to prepare the annual municipal health report for the Corporation, under the difficult circumstances of having taken office only towards the close of the year for which he has to report. He has brought together the data relating to the meteorology and vital statistics of the year, and commented upon them so as to leave no break in the series of annual reports, and to keep the reader acquainted with the main sanitary events of the year. A brief reference to *beri-beri*, which has recently shown itself in Calcutta, constitutes a novelty in the report, but Dr. M'Leod defers treating of the subject in detail until a future report. He tells us, however, that the disease was first observed in the southern suburbs of Calcutta in the rains of 1877. It disappeared during the cold and hot seasons of 1878, and broke out again in the southern and eastern suburbs over a more extended area, and towards the close of the rains of 1878. The disease again subsided, and reappeared in its old haunts and in some parts of Calcutta in November and December, 1879. "No cases occurred in the town up to this time, and the localities where it showed itself are contiguous to those parts of the suburbs where it existed in the two preceding years. The malady did not attract much attention until after the close of the year." A detailed investigation has been made of the circumstances attending this outbreak, and a report prepared for the information of the Government. It may be useful to mention here that an account of *beri-beri* will be found in the volume of the *Practitioner* for 1877 from the pen of Sir Joseph Fayrer, K.C.S.I. The chief facts of the year in relation to the health of Calcutta were an uneventful meteorology, a death-rate above the decennial average, but below that of the two preceding years, a "lamentably high" rate of infant mortality (unhappily as usual), a diminished mortality from fever, from cholera, from small-pox, and generally from bowel complaints.

Dr. Cameron has given notice that on the House of Commons going into Committee of Supply (Friday, June 11th) he will call attention to the practice of animal vaccination, and move a resolution; and Mr. Samuelson has given notice that, as an amendment to Dr. Cameron's notice on animal vaccination, he will move, "That, inasmuch as it has been shown that vaccination, as performed by certain public vaccinators, has caused the propagation of other diseases, as the reliance on vaccination as a protection against small-pox has been diminished by differences of opinion amongst medical authorities, and as the penalties for non-compliance with the law have in some cases been enforced in an oppressive manner, it is expedient that an inquiry into the whole subject by a Royal Commission should be instituted." Sir Harcourt Johnstone will move the repeal of the Contagious Diseases Act; Mr. Hibbert, the Parliamentary Secretary of the Local Government Board, has several notices on the motion paper relative to Provisional Orders regarding sanitary and other matters in various localities; Mr. Moldon proposes to introduce a Bill into Parliament amending the laws in Ireland relating to the registration of births and deaths; and Mr. Redmond will introduce a Bill to amend the Public Health Act (Ireland).

HEALTH OF THE EUROPEAN AND NATIVE TROOPS AND CIVIL POPULATION IN INDIA, 1878.[1]

THE report of the Sanitary Commissioner for 1878 shows it to have been a very unhealthy year, as measured both by the sickness and the mortality, and to have been so in all classes—European troops, native troops, gaol population, and the civil population. A high death-rate prevailed all over India, and was due to an increase in nearly all the chief diseases. We shall bring under the notice of our readers a few of the leading facts noted in the Report. And first as regards the European troops. The admissions into hospital amounted to 1651, the deaths to 21·46, the invaliding to 44·98, and the mean daily sick to 67 per 1000 of mean strength. These ratios were much higher than in 1877, which was a remarkably healthy year, and, except the invaliding, were considerably above the average for the five years 1871-5, which was: admissions 1394, deaths 17·62, invalided 43·09, and mean sick 57 per 1000. The results in 1878 for the three Presidencies separately were as follows:—

	Admissions.	Deaths.	Invaliding.	Mean Sick.
Bengal .	1675 ...	21·63 ...	40·52 ...	68
Madras .	1392 ...	21·82 ...	47·80 ...	65
Bombay .	1848 ...	20·46 ...	58·12 ...	67

This shows the sickness and invaliding to have been greatly in excess in Bombay, the mortality to have been highest in Madras, and the proportion constantly sick in Bengal. The class of diseases which gave rise to the greatest amount of sickness was that of fevers, which occasioned upwards of two-fifths of all the admissions into hospital; and of this class two-thirds of the cases were of the intermittent type. Next in frequency to fevers stand venereal diseases, amounting to nearly one-sixth of the whole. The principal causes of mortality were fevers, diseases of the digestive system, and cholera, the deaths by them respectively being in the proportion of 5·07, 4·09, and 4·00 per 1000 of the strength. The admissions and deaths by fevers in the three Presidencies were in the following proportion:—

	Per 1000 of Strength.	
	Admissions.	Deaths.
Bengal . . .	698 ...	6·28
Madras . . .	362 ...	2·31
Bombay . . .	910 ...	3·67

The prevalence of fevers in Bombay and the mortality in Bengal were excessive, while Madras enjoyed a comparative immunity. In Bengal, they were in considerable excess at Jullundur, Mooltan, Amritsar, Lahore, Attock, and Peshawar, while the mortality was highest at Bareilly. In Madras, Bellary alone showed a very high ratio of cases; while in Bombay the only stations which enjoyed a comparative exemption from them were Indore and Ahmednagar. The report goes at some length into the question of the prevalence of enteric fever (so called), the deaths by which were 4·69 per 1000 of the strength in Bengal, 1·20 in Madras, and 2·55 in Bombay. The low rate, however, in Madras is believed to have arisen partly from cases having been returned as continued and remittent, instead of enteric, in consequence of the strongly expressed doubts of the Principal Medical Officer, Dr. C. A. Gordon, as to the existence of true enteric fever among soldiers in India. In connexion with this, it is remarkable that the proportion of deaths to cases returned under this head was 61·90 per cent. in Madras, 55·56 in Bombay, and 40·68 in Bengal. The facts detailed in the Report confirm the opinion that the so-called enteric fever is especially a disease of young soldiers during their early years of Indian service, and furnish no evidence of importation.

Diseases of the digestive system, which, next to fevers,

[1] Fifteenth Annual Report of the Sanitary Commissioner with the Government of India, 1878. Calcutta, 1880.

were the cause of the greatest mortality, were distributed in the three Presidencies as follows :—

	Per 1000 of Strength.	
	Admissions.	Deaths.
Bengal ...	152 ...	3·44
Madras ...	230 ...	6·75
Bombay ...	154 ...	3·56

This shows the admissions by these diseases in Madras to have been one-half higher than in the other Presidencies, and the deaths to have been nearly double.

The deaths by cholera amounted to 4·16 per 1000 in Bengal, 2·77 in Madras, and 4·79 in Bombay; so that Madras enjoyed a very marked exemption from this disease. It was not general as an epidemic among the troops in any of the Presidencies. It prevailed, however, in Bengal in that form at Morar in May, and at Fyzabad and Lucknow in August and September; in Bombay, at Nusseerabad in August, and Neemuch in November; and in Madras, at Secunderabad in July and August. The formidable nature of the disease is shown by the deaths having amounted to 226 in 305 cases, or 74 per cent.

The admissions into hospital for venereal diseases amounted to 271 per 1000 of the strength, and were about one-sixth of all the cases. They were most prevalent in Bengal and least in Bombay; the proportion in the three Presidencies respectively was 289, 250, and 231 per 1000. This is a considerable increase upon preceding years, and the question of the best means of reducing it deserves the serious consideration of the Indian authorities, the more so as the proportion of cases of primary syphilis is very large, amounting to 95 per 1000, or one-third of all the venereal admissions.

The mean daily sick of the European troops amounted to 68 in Bengal, 66 in Madras, and 67 in Bombay, and the mean sick time to each soldier to twenty-five, twenty-four, and twenty-five days in each respectively. These results are most unfavourable, the mean sick in Bengal and Bombay being now 12, and in Madras nearly 8 per 1000 above the average of preceding years.

The returns of the Native Army in India do not furnish more satisfactory results than the European. The admissions into hospital were 1460 per 1000, the deaths 21·02 and the mean sick 43, all very much higher than in the preceding year. The great excess of admissions occurred in the Punjab Frontier Field Force, the Bombay Native Army, and the Bengal Native Army, and of deaths in the Punjab Force and the Bengal Army. The relative sickness and mortality of the different forces constituting the Native Army of India were as follows :—

	Ratio per 1000 of Strength.		
	Admissions.	Total Deaths.	Mean Sick.
Bengal Native Army . . .	1644 ...	25·57 ...	49
Madras Native Army . . .	841 ...	15·49 ...	29
Bombay Native Army . . .	1701 ...	17·95 ...	45
Central Indian Regiments .	1177 ...	18·09 ...	34
Punjab Frontier Field Force .	2246 ...	28·25 ...	64
Hyderabad Contingent. . .	1055 ...	16·80 ...	37
Total, Native Army .	1460	21·02	43

The great excess of admissions in the Punjab Frontier Force was caused by fevers, dysentery, wounds and accidents, abscesses and ulcers, and respiratory diseases; in the Bombay Army by the prevalence of fevers in the Northern Division, and in the Bengal Army by the same class in the Punjab, and in Agra and Central India. The chief causes of mortality in the Bengal Army were diseases of the respiratory system, fevers, diseases of the digestive system, and cholera; in that of Bombay fevers, respiratory diseases, cholera, and diseases of the bowels; and in Madras cholera and fevers. Compared with the other two Presidencies, Madras furnished a low rate of deaths by respiratory diseases. In all of them the mortality by phthisis is remarkably low. In Bengal three regiments appear to have had an enormous death-rate. The 36th, at Barrackpore, lost 264 men per 1000 of the strength, the chief causes being fevers, dysentery, and diarrhœa, stated to "have been due to malarious poisoning consequent on residence in Lower Bengal and the occupation at Barrackpore of unhealthy, badly-drained lines." In the 14th Regiment, at Peshawar, the death-rate was 128 per 1000, chiefly from fevers and diseases of the respiratory organs; and in the 41st, at Morar, it was 97 per 1000, two-thirds of the deaths being from cholera in a treasure escort marching between Agra and Gwalior. There was no general outbreak of cholera among the native troops. In Bengal the escort alluded to was the only corps in which it prevailed to any extent; 109 cases occurred in it on that occasion, of which 58 died. In Madras 24 cases, with 14 deaths, occurred at Secunderabad; 28, with 19 deaths, at Bellary; and 11, with 5 deaths, at Kamptee. In Bombay there were 17 cases and 9 deaths at Rajkot; 15 cases and 9 deaths at Ahmedabad; 14 cases and 8 deaths at Indore; and the Hyderabad Contingent had 18 cases and 7 deaths at Hingoli, and 15 cases with five deaths at Bolarum. It is noteworthy that while the deaths from enteric fever were 3·64 per 1000 among the European, they amounted only to 0·5 among the native troops.

An interesting supplementary table is given in the appendix, showing the sickness and mortality of the native troops sent to Malta and Cyprus. The force, 5332 strong, embarked in May, and the last portion of it returned in November. The admissions into hospital in it amounted to 4116, the deaths to 28, and the mean daily sick to 157·4. These numbers, calculated on the average strength, give the *annual* ratios of 2031 admissions, 13·82 deaths, and 61·7 constantly sick per 1000; the admissions and mean sick are higher, but the deaths considerably lower than the average in India. More than half the admissions were for paroxysmal fevers; seven deaths were caused by the same diseases and seven by dysentery and diarrhœa.

As the Afghan expedition did not start till near the end of November, all the details respecting the health of the men composing it are reserved for the next report.

The unfavourable results which have been shown as regards the sickness and mortality among the troops have been still more marked in the gaol population, of which the death-rate has been lamentably high. The average strength of prisoners was much greater than in the preceding year, having been 127,914 as against 110,147. This increase is attributed to the famine and distress under which the people suffered, "both directly and indirectly, from the high prices of food, and the consequent privation which was so widely spread over the country." The proportion of admissions and deaths was as follows :—

	Per 1000 prisoners.		
	Admissions.	Deaths.	Constantly sick.
Bengal	1181 ...	65·85 ...	40
Madras	941 ...	125·92 ...	52
Bombay	1327 ...	118·27 ...	43
India	1198 ...	81·31 ...	46

Compared with 1877 there has been a marked increase in all three, particularly in Bengal and Bombay, and in the mean sick in Madras, but a slight decrease in the admissions and a marked one in the deaths in the latter Presidency. While this excessive sickness and mortality have been in a great measure due to the circumstances above noted, we fear that it has also been to some extent caused by the unfavourable influence of the overcrowding of the gaols with the unfortunate prisoners in a very low state of health, and therefore unusually susceptible of disease. The chief causes of death were dysentery and diarrhœa, which furnished a ratio of 32·76 per 1000, fevers 9·74, atrophy and anæmia 8·68, respiratory diseases 7·89, and cholera 5·90. The mortality by fevers in Bombay, however, was far in excess of the average, the ratio having been as high as 32·57, while in Madras it was only 3·61, and in Bengal 7·40 per 1000. It is stated in the report that the form of fever in Bombay was the relapsing or gaol fever. In Madras, again, the deaths from dysentery and diarrhœa amounted to 54·8 per 1000, being much above the average. In that Presidency 402 deaths are recorded from general debility, being in the ratio of 18·86 per 1000, and 232, or 10·88 per 1000 from ulcer, both very much higher than in either of the other Presidencies.

A table in the appendix shows the death-rate of each gaol in India, and the results for some are appalling. For instance, in Bengal, among an average of 99 prisoners at Jalpaiguri, the death-rate was 414 per 1000, and at six other gaols in the Presidency it was over 200 per 1000; in Bombay, at Belgaum, in an average of 185 prisoners it was 492 per 1000, and in the Gokak Gang, 732 strong, 402; two other prisons exceeded 200 per 1000. In Madras, at the Coimbatore District Prison 463 prisoners gave a ratio of 384 deaths per

1000, and at Kurnool temporary prisons 519 furnished 380 per 1000. In all these gaol returns a most important element is wanting to enable us to make any comparison either with other prisons, with each other, or with other classes of the population. There is no information as to the ages of the prisoners and the proportion at each age. We have, however, considered the information, imperfect as it is, to be sufficiently interesting to bring some of the leading facts before our readers.

There is a considerable amount of information in the report relative to the vital statistics of the civil population, but the system of registration is so very imperfect, and so unequally imperfect in different districts, that we refrain from going into detail on the subject. A tabular summary is given of the "measures adopted or suggested during the year for improving the sanitary condition of the cantonments" in the Bengal Presidency. We observe with much satisfaction that the military authorities have at last taken steps to diminish the temptations held out to soldiers to indulge in alcoholic drinks. This has been done by making arrangements for the supply of good malt liquor at a moderate price in the canteens, and allowing the men to have it in small quantities, and by increasing the price of rum, and limiting the quantity allowed to be purchased by each man to half a drachm twice a day.

The information given respecting the civil sanitary works is very general. We infer from it that appreciable progress is being made, though very slowly, and that there is still an immense amount of work to be done before the health-conditions of the country can be deemed satisfactory. We observe with pleasure that in Assam great improvements have been effected in the tea gardens, and that the planters have taken much interest in the health of their labourers. We have more faith in the good results of individual exertion in this respect in India than in the acts of the Government, especially when, as at present, their attention is devoted, perhaps too exclusively, to economy to be effected by reduced expenditure. Sanitary works are then very apt to be considered as of secondary importance.

THE SERVICES.

EXCHANGES IN THE ARMY MEDICAL DEPARTMENT.

WE regret to learn that a step has been taken by the War Office which cannot fail to rekindle in the Army Medical Department that feeling of distrust which exerted so powerful an influence in rendering the service unpopular. It is stated in the *United Service Gazette* that "It has been decided that in an exchange which involves a change of station the officers shall forfeit all claim to pay for the period they occupy in travelling." Our contemporary states that "This new mark of ignominy is actually attributed to the volition of his Royal Highness," and, in exonerating the Duke, attempts to throw the blame on the Director-General. So far as we can learn, however, neither of them is responsible for this unwise measure, the arrangement having emanated from the financial department of the War Office. We believe that the question was in the first instance raised by the Indian Government, who objected to the loss of the services of medical officers during the time the exchange was being effected. If this objection be valid, however, in the case of medical officers, it must be equally applicable to all other classes, and as the Secretary of State announced that exchanges between medical officers were in future to be allowed under the same regulations as for the rest of the service it appears manifest that Government is bound either to cancel this new regulation as regards them, or to extend its operation to all classes in the service. We trust that one of the members of our profession in the House will ask for an explanation of the circumstances under which, and on whose recommendation, this rule has been made. We can only say that if this system of class legislation is followed out by the War Office the beneficial effects of Colonel Stanley's warrant will soon be completely nullified.

THE WAR IN AFGHANISTAN.

Our Cabul correspondent, writing in April, gives us the proposed arrangements for the hospitals, and the medical care of the troops, in view of the approach of the hot season. During March convoys of sick and convalescents, in parties of fifty and one hundred strong, were despatched weekly to India; after the 25th of that month the Principal Medical Officer, Dr. Hassard, did not think it wise to start invalids back to the base hospital at Peshawur, on account of the intense heat along the Khyber route. But camps had been formed at Barakat, Luttabund, Seh Baba, and Jugdulluck, and the parties of sick and wounded were conveyed successfully by the "staging system," which had been found most useful in economising transport and carriage. During March the climate of Cabul is described as having been very pleasant—a bright warm sun by day, with hard frost at night. Pneumonia, from which the troops suffered so severely in the winter, had disappeared with the advent of warm weather. Venereal disease was reported very prevalent, otherwise the sick list was very small. Great improvements had been made in the cantonments of Sherpur, at one time a thousand coolies being employed making roads and surface drains. The field hospitals of the 1st and 2nd Divisions of the Cabul Field Force have been amalgamated into a Field General Hospital, established in the Bala Hissar, and supervised by Deputy Surgeon-General Hanbury, Surgeon-Major S. B. Roe, and Surgeon-Major G. Farrell, of the 5th Ghoorkas, being placed respectively in charge of the European and native sections. In the Khyber Division (General Bright's) the hospitals for the summer months are established on a platform over the Safed Sung, the heights of which are 7000 feet above sea level. Small sections of the field hospital will be located at Gufaid Sung, and Paniwan, but all serious or protracted cases will be sent up to the main hospital. As far as is consistent with military necessities, the troops will be concentrated at Safed Sung; there is plenty of room for a camp of 10,000 men on these heights; water, too, is good and abundant. For shelter, both in the mountains and in the low-lying plains, mud huts with thick mud roofs are considered far and away the best protection from sun and rain; wooden or iron huts are not to be obtained in any quantity, and are expensive and less comfortable than the mud hut of the country.

ARMY MEDICAL DEPARTMENT.—Deputy-Surgeon-General George Augustus Frederick Shelton, M.B., to be Surgeon-General, vice W. G. Watt, granted retired pay; dated 27th March, 1880. Brigade Surgeon Herbert Taylor Reade, V.C., to be Deputy Surgeon-General, vice G. A. F. Shelton, M.B.; dated 27th March, 1880. Surgeon-Major James Doran, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; dated 26th May, 1880.

BENGAL MEDICAL ESTABLISHMENT.—Surgeons to be Surgeon-Majors: Surgeon David Douglas Cunningham; dated 1st April, 1880. Surgeon Henry Whitwell; dated 1st April, 1880. Surgeon Archibald Cameron, M.D.; dated 1st April, 1880. Surgeon Benjamin Evers, M.D.; dated 1st April, 1880. Surgeon James Charles Gordon Carmichael, M.D.; dated 1st April, 1880. Surgeon Alexander Gibb Grant; dated 1st April, 1880. Surgeon Warwick Jackson; dated 1st April, 1880. Surgeon George Gilbert McLaren; dated 1st April, 1880. Surgeon Joseph Johnstone Monteath, M.D.; dated 1st April, 1880.

DEPUTY SURGEON-GENERAL G. A. F. SHELTON, M.B., who was promoted to the rank of Surgeon-General in the last *Gazette*, has been appointed Principal Medical Officer at Aldershot.

GUY'S HOSPITAL MEDICAL SCHOOL.

AT the meeting of former students of Guy's Hospital, held on Friday last at Willis's Rooms, an hour before the Guy's Biennial Festival Dinner, the following resolution, proposed by Dr. W. F. Cleveland, seconded by Dr. A. Evershed, was unanimously passed:—

"This meeting, consisting of former students of Guy's Hospital Medical School, desires to express its very warm sympathy with the present members of the medical and surgical staff of the school in the extra anxiety which has been associated with their tenure of office during the past few months, and at the same time to record its conviction that in the hands of the present staff the past pre-eminence of the school of Guy's Hospital will be most worthily maintained."

Over one hundred gentlemen at once subscribed their names to the resolution.

Correspondence.

"Audi alteram partem."

"OVER-EXAMINED AND UNDER-TAUGHT."

To the Editor of THE LANCET.

SIR,—In a leading article of THE LANCET last week you say, *à propos* of the subject of the preliminary examinations of the Royal College of Surgeons, that the College of Preceptors, to whom the "charge and management" of these examinations are entrusted, "shows its appreciation of the educational requirements of the medical student in French, German, and Greek, by never changing the subject for examination in these languages." After enumerating the books prescribed for examination, you add, "the College of Preceptors have not changed any of their subjects for ten or fifteen years!"

I am sure that nothing is farther from your intention than to do an injustice to this body, and therefore make no apology for asking you to allow me to state, for the information of your readers, what is its real relation to the preliminary education and examination of medical students. The College of Preceptors is one of the general bodies whose examinations are recognised by the Medical Council as guarantees of a good general education. In the case of the College this recognition is limited to its "first-class certificates," and by referring to the published regulations for this examination and to the papers actually set for it (both of which will be found in its calendar for the present year, herewith sent), you will find that no books whatever are set in either French or German, the attainments of the candidates being expected to be such that they can translate *an unprepared passage from any ordinary author* in those languages. In Greek, Xenophon's "Anabasis" is only one of *three* books from which candidates can make their selection, but in all cases "short and easy passages for translation from authors not specified," as well as "prose composition of a simple kind," are required in addition. It must be obvious that no "committing to memory" can cover such an examination as this.

It is true that the work of the College of Preceptors is not confined to the examination for its own certificates. Like the Universities of Oxford, Cambridge, and London, it is open to applications for the examination of students of schools, colleges, and public bodies connected with education generally; and its board of examiners are prepared to pronounce and report upon the efficiency or attainments of candidates who come before them to be tested on a prescribed programme of studies. Amongst other bodies who have applied in this way to the College are the Royal College of Surgeons, the Royal Veterinary College, and the Pharmaceutical Society of Great Britain; but the schemes of examination of these bodies have been framed in each case by the Councils of those institutions themselves, who must be held to be the best judges of the course of education most suitable for their own candidates, and not by the College of Preceptors, which has no power either to select the subjects of examination or to alter them.

I take it for granted that you could not have been aware of these circumstances when you spoke of the College "showing *its* appreciation of the requirements of medical students" by not changing its text-books for so many years. Having been connected, as an examiner, with the College for more than twenty years, I can state from personal knowledge that, so far as relates to its own examinations, it has never, during that time at least, examined from the same French or German author two half years consecutively; and as regards Latin and Greek, while it has, by prescribing certain books, secured on the part of the candidates some acquaintance with *the best authors*, it has provided an effectual remedy against any attempt at *cram*, by the expedient I have described of not limiting the examination to translation from the books selected.

I am, Sir, yours obediently,

May 24th, 1880. EXAMINER.

*** We willingly insert our correspondent's disclaimer, which fixes on the Council of the Royal College of Surgeons the chief responsibility of the discreditable state of things commented on last week. We use the words "chief responsibility," because we cannot hold the College of Preceptors wholly blameless in this matter. As "Examiner" is careful to point out, whenever the College of Preceptors conducts its own examinations it adopts effectual precautions against "cram," but when taking charge of the College of Surgeons' examination it seems never to have remonstrated with the Council of the College on the imbecility of never changing the subjects for examination in French, German, or Greek. It may be well to state that whenever the matter has been brought before the notice of the Council of the College of Surgeons this body has always encouraged the belief that the management of its preliminary examinations and the regulations pertaining thereto, were entirely in the hands of the College of Preceptors. Henceforth, we shall know exactly where to affix the blame, though, as we have said, we cannot acquit the College of Preceptors of neglect of obvious duty in the past. We would, in parting, suggest to the examiners for the College of Preceptors that in the examinations which they undertake for the other bodies, they should try the experiment of occasionally leaving out, without indication, a sentence from the passage given for translation. We shall be surprised if they do not sometimes encounter an accurate translation of the missing sentence.—ED. L.

To the Editor of THE LANCET.

SIR,—In the interest of teachers and pupils alike, it is to be earnestly hoped that Mr. Marshall's scheme for the introduction of a further examination, and that an inquisitorial one, into the curriculum of the College of Surgeons, will not be carried out. The fact that the proposed examination will differ in character and aim from any other yet instituted, ought to necessitate the very fullest discussion of the plan before its adoption, while it is currently believed that Mr. Marshall's proposal was agreed to by the Council of the College of Surgeons without any such discussion. My object, however, in addressing to you this letter is to call attention to what I believe to be at any rate some of the most efficient causes of the number of rejections at the Primary College of Surgeons' Examination, which would be in no way affected by Mr. Marshall's scheme. And, first of all, I would deny the charge so often brought against first-year students, that they are thoroughly idle. I believe that nothing is farther from the truth; the idleness of medical students is acquired, and, to a large extent, enforced. In his study of anatomy every student has two difficulties, which the very strongest among them often fails to overcome. The first is the long time that frequently elapses before he commences dissection, or between the completion of one "part" and the commencement of a second. Men learn their bones by the beginning or middle of November, while it frequently happens that they are not provided with "parts" until Christmas, or even later. The necessary result is that at the end of March they cannot know very much of the anatomy of the limbs even. And what happens then? We might suppose that the summer session would be utilised in remedying the deficiencies of the winter, but not so; they are then told to lay aside anatomy altogether and devote themselves to botany, materia medica, and practical chemistry, which in actual practice is the Derby and cricket. After a six-months' interval they are recalled to the dissecting-room, and great astonishment is expressed at their having forgotten nearly all of the little they had learnt the winter before. I feel confident, Sir, that two reforms urgently needed are a larger supply of "subjects" for dissecting, so that men can get to work as soon as they know their bones, and keep at work, and that the study of anatomy and physiology should be continued through the first summer. If it is said that the summer session is already fully occupied, I can only reply that students at the Westminster Hospital find abundance of time for dissecting during the summer, and that it is essential for those preparing for the degree of the University of London.

If we turn to the study of physiology, the student's difficulty in it is as great, for at present the lectures are either

too simple for the senior students, or too elaborate for the juniors. I could instance a case in which men new to the whole subject were first of all introduced to a careful and complete description of the intricacies of embryology. Physiology, as now studied, is not so simple that it can be well taught in one course of lectures. I would say that if students were first of all grounded in the main principles—the broad established facts of physiology—there would then be some possibility of the richly-elaborated lectures now delivered at some schools being understood and useful; at present we dare not hope that they are to a large extent anything but a waste of strength. Could these simple reforms be carried out, I think we should cease to hear of the idleness of first-year men, and of the large percentage of failures at the Primary Examination.

I am, Sir, your obedient servant,

Queen Anne-street, W. A. PEARCE GOULD.

ANALYSES OF CHIAN TURPENTINE.

To the Editor of THE LANCET.

SIR,—The results of some recent analyses of samples of genuine and spurious Chian turpentine may be of interest at the present time.

The first sample I examined was probably at least ten years old; and it is possible, though not certain, that it was a portion of the very sample reported on in Flückiger and Hanburys' "Pharmacographia." If this is not the case it came from the same source of supply. I need not repeat the description given in "Pharmacographia," for this drug corresponds accurately to it, except that from age it appears to have become somewhat more brittle, though without losing its plastic character.

The specific gravity at 60° Fahr. is 1·050. When a small fragment is heated in water to the boiling-point it melts, and becoming lighter than water, floats as a clear film. It dissolves freely in hot alcohol of 60 overproof, but a portion of one of the resins separates on cooling. A small sediment of insoluble earthy matter was left. This amounted to 7·3 per cent. on the sample, and consisted almost entirely of sand, not of silica, which had been in a state of combination. A 20 per cent. solution in a tube 200 millimetres long gave a + rotation of 9° 12′ for the sodium ray. It contained two different resins, one of which appears to be identical with the *Alpha* resin of mastich; the other is readily saponified, and is identical in its general characters with the *Gamma* resin of benzoin. The *Beta* resin of mastich is certainly absent. For convenience in stating the results I assume these resins to be what they appear to be.

This sample gives the following quantitative results:—

Volatile oil	9·20	per cent.
Alpha resin	79·00	,,
Gamma resin	4·00	,,
Benzoic acid	Traces	,,
Impurities	7·30	,,

A 20 per cent. solution of the volatile oil separated by distillation was polarised separately, and gave a + rotation of 1° 54′ in the 200 millimetre tube. The quantity at my disposal was insufficient to test the boiling point or specific gravity. This volatile oil had a very marked and pleasant aromatic smell, the odour of fennel was perceptible though very faint.

I gave a portion of this to a medical man, who was treating two cases of uterine cancer with Chian turpentine (so-called), but without effect. He used this sample instead of his own, and reports a very favourable improvement after eighteen days' use.

The second sample was purchased in London. In general appearance it was similar to the last, though somewhat less brittle. Its specific gravity was 1·043 at 60° F. The rotation in the polariscope was practically identical with the last sample, and the rotation of the distilled volatile oil was exactly identical. The analysis showed a larger proportion of volatile oil—namely, 12·1 per cent.—and barely a trace of ash. This sample was evidently a newer one, but had been collected with greater care, so that there were smaller proportions of mineral impurities.

The third sample was also purchased in London from a wholesale firm, and was obviously spurious. In appearance it closely resembled Canada balsam. The smell was less pleasant, and the odour of fennel much more marked. It had an unpleasant taste. It was perfectly transparent, of a yellowish tint, and just sufficiently fluid to drop from the end of a glass tube. Its specific gravity was 1000, or identical with water at 60° F. A 20 per cent. solution gave a + rotation of 6° 15′ in a tube 200 millimetres long for the sodium ray—i.e., about two-thirds of the rotation of the genuine sample.

There was no difference worthy of note as to its solubility in alcohol, ether, chloroform, petroleum-spirit, naphtha, bisulphide of carbon, or turpentine, which would serve to distinguish it from the genuine sample. The proportions of volatile oil, &c., were, however, very different. This gave—

Volatile oil	26·00	per cent.
Alpha resin	70·00	,,
Gamma resin	3·00	,,
Benzoic acid	None	
Ash	Trace	
Impurities, woody fibre, &c. ...	,,	

The *Alpha* resin in this case, although separated in precisely the same way, was obviously a different resin. In appearance it very closely resembled common colophony resin, and from my examination I am of opinion that, at any rate, it contained a very large admixture of that resin, which had probably been dissolved in, or mixed with, one of the fluid turpentines. The volatile oil of this sample was entirely different in character, offensively rank instead of pleasant in smell. In the polariscope it gave a + rotation for a 20 per cent. solution of 3° 36′, or nearly double that of the genuine samples. This volatile oil appeared to consist of at least two entirely distinct oils.

The fourth sample was a new supply just sent to this country, of which I obtained a few ounces. It is evidently a much more recent specimen, but, though from this cause softer and more plastic, the brittle character is as strongly marked as in the old sample. Its optical rotary power is, under the same condition as before, 7° 46′, or lower than the old sample, and the rotary power of the volatile oil is precisely the same. Its specific gravity is 1·052, or higher than the old sample. It is very free from mineral impurities. This, when analysed, gave—

Volatile oil	9·20	per cent.
Alpha resin	81·00	,,
Gamma resin...	6·00	,,
Benzoic acid	Traces	
Impurities, ash	1·40	,,
Insoluble	2·00	,,

From its general characteristics and the source from which it was procured, I have no doubt of the genuineness of this sample, and the difference between the analysis and the first will show what may be the natural variations of the turpentine itself or the changes it undergoes by lapse of time.

A fifth sample, also a recent importation, proved to consist of 60 per cent. of Chian turpentine and 40 per cent. of Canada balsam and turpentine resin. This sample had a specific gravity of 1025, and contained 16·3 per cent. of volatile oil, a large proportion of which was not the true volatile oil of Chian turpentine.

The practical test which results from all these facts is the specific gravity. Genuine Chian turpentine should float in a solution containing 8 per cent. by weight of concentrated sulphuric acid, and should sink as soon as this is diluted. On the other hand, the adulterants used being lighter than water, the spurious samples will float in this acid even after it has been diluted, say to three times its volume, and will sometimes even float in pure water. This test is perfectly easy to apply.

I trust Professor Clay will be able to say which of these is identical with that he has been employing, especially as it is noteworthy that although he quotes the description in "Watts' Dictionary," one word appears to have escaped his notice. Watts calls Chian turpentine *viscid*. Now this would correspond with the spurious sample, but not with the genuine ones, which are brittle.

I am, Sir, yours obediently,

G. W. WIGNER.

Laboratory, Great Tower-street, May 19th, 1880.

ENTERIC FEVER IN ASCENSION.

To the Editor of THE LANCET.

SIR,—I enclose a letter just received from Staff-Surgeon Maclean, R.N., on the subject of Enteric Fever in Ascension. Will you give it, like others on the same subject, a place in THE LANCET.

Yours faithfully,

J. FAYRER.

Granville-place, Portman-square, W.

Royal Naval Hospital, Ascension, 22nd March, 1880.

SIR,—I think my experience of enteric fever, as it has prevailed in this isolated spot since my arrival in June, 1878, may be considered of sufficient interest, in connexion with the views expressed by you in your presidential address at the Epidemiological Society, to excuse my addressing you on the subject.

During this period cases of the disease have occurred from time to time without any discoverable connexion with each other, and in the great majority of cases in the persons of new-comers. In every instance the disease was clearly marked by the usual characters, and could not possibly be mistaken for any other. If enteric fever, according to the commonly accepted theory of its origin, is always associated with defective sanitary arrangements, then Ascension, of all places with which I am acquainted, ought to be exempt from it. There is no such thing as a sewage-drain or cesspool in the island, all sewage and other filth being removed daily, and thrown into the sea to leeward of all dwelling-houses. The water (partly collected from the roofs of buildings during rain, and partly condensed) is stored in iron and cemented stone tanks, removed from all possible source of contamination, with the exception of the summit of Green Mountain, where there is a soil resulting from the decomposition of grey trachyte (the fundamental rock of the island), giving rise to a feeble vegetation. The island is a mass of volcanic rock and ashes, incapable of supporting any vegetable life whatever. My investigations have utterly failed to connect the fever with any of the conditions commonly believed to be essential to its production. The idea of a climatic origin did indeed occur to me, but it seemed like heresy to suggest such a thought; and I was obliged to be contented with the fact of the existence of the disease without pretending to explain its origin.

After reading your address at the Epidemiological Society, I am encouraged to send this communication to you, in the hope that it may in some degree contribute to the establishment of the view there expressed, that under certain, as yet unknown, meteorological conditions a disease indistinguishable in its symptoms and pathology from enteric fever may arise independently of a specific cause.

I am, Sir, your obedient servant,

G. MACLEAN,
Staff-Surgeon, R.N.

Sir Joseph Fayrer, K.C.S.I., F.R.S. &c.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 20th inst.:—

William Laird Cox, Abbey-gardens.
John Chislet Culling, L.S.A., West Lydford, Somerset.
Donald Douglas Day, Blackheath.
William George Evans, Sutton, Shropshire.
Walter Gray, Old Charlton, Kent.
Walter Augustus Hume, L.S.A., Hounslow.
H. J. Dempster Innes, Barnes, Surrey.
Hubert Montague Murray, Haverstock-hill.
John Michael Nicholls, Hayle, Cornwall.
Wallace Petherick, Exeter.
Benjamin Poulton, M.B., Melbourne, Victoria.
Henry Rees, Swansea.
James Benjamin Rusher, L.S.A., Pershore, Worcestershire.
Horatio S. R. Sparrow, Southsea, Hants.
Francis Tichborne Wilkinson, Lewisham.

Of the 87 candidates examined, 46 passed to the satisfaction of the Court, and obtained their diplomas; 4 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 37 failed to reach the required standard, and were referred for six months' further professional study. Five candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

The following gentlemen passed the Primary Examination in Anatomy and Physiology for the Fellowship of the College, at Meetings of the Board of Examiners during the week:—

Samuel D. Chippendale, Aberdeen and London Hospital; Basil W. Walker, London Hospital; Henry Briggs, Edinburgh and Manchester; Robert H. Perks, Guy's Hospital; Frederick Bass, St. Bartholomew's Hospital; Charles J. Pike, University College; George J. H. Steinthal, Manchester; John A. P. Price, Guy's Hospital; A. Fraser, Glasgow and Manchester; G. J. Lloyd, Birmingham; John Waldy and William Robinson, Newcastle-on-Tyne College of Medicine; Paul F. Moline and Sidney H. Cox Martin, University College; William B. Paterson and Charles A. Morton, St. Bartholomew's Hospital; Edward H. Booth, William S. N. Shorthouse, and Frederick Eastes, Guy's Hospital; Edgar M. Crookshank and St. Clair Thomson, King's College; James O'M. McDonnell, Dublin and St. Thomas's Hospital; Herbert H. Back, Henry B. Tait, and Charles F. Bailey, St. Bartholomew's Hospital; F. Hewkley, London and Newcastle-on-Tyne College of Medicine; Walter C. Dendy and Henry Blathwick, Guy's Hospital; Charles S. Evans and William T. Crick, St. Thomas's Hospital; Robert H. S. Spicer, St. Mary's Hospital; Thomas H. Pounda, Charing-cross Hospital; Charles Wray, London and Newcastle-on-Tyne College of Medicine.

At the last meeting of the Council the following member of the College was elected a Fellow, viz.:—

William Lees Underhill, Tipton Green, Staffordshire.

The half-yearly examinations for the Fellowship of the College took place on the 21st inst., when sixty-eight candidates presented themselves for the Primary, or Anatomical and Physiological, examinations—viz., forty-nine from our metropolitan schools, twelve from the provincial, and seven from the combined schools. Of these gentlemen nine were members of the College. With the exception of four candidates the others had all passed the primary examinations for the membership.——The annual course of lectures delivered at the Royal College of Surgeons, which were suspended on account of the great number of candidates for examination, will be resumed on Wednesday, the 2nd prox., when Professor Butlin will deliver the first of three lectures on the Relations of Sarcoma to Carcinoma, on the completion of which Mr. B. T. Lowne will deliver three lectures on the Development of Sensory Organs, and on the 14th the concluding course will be commenced by Professor Hutchinson, who will deliver six lectures, four on Some of the Surgical Bearings of Gout and Rheumatism, and two on the Etiology of True Leprosy.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 20th:—

Rees Thomas Edward Davies, Millfield-park, Aberdour.
Charles John Carrol Otway, Kennington-park-road.
Alfred Edgar Wigg, Adelaide, South Australia.

The following gentleman on the same day passed the Primary Professional Examination:—

Arthur Longman, St. Thomas's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—The following were admitted members of the College on the 7th and 14th instant:—

D. F. Buckley, John Joseph Crean, Arthur Croker, William H. Elmes, William Hartigan, Richard Alfred O'Brien, Patrick Magennis Rice, James H. Scott, John Wood, Edward Wellington Wrightson.

A CONCERT held in the Corn Exchange on the 20th instant, in aid of the funds of the Herts Convalescent Home, realised a sum of about £50.

THE PRINCESS OF WALES has consented to lay the foundation stone of the new Hospital for Women, to be erected in the Fulham-road. The ceremony will, it is expected, take place early in July next.

THE annual meeting of the members of the Devon and Exeter Benevolent Medical Society was held on the 13th inst. The funds of the Society appear to be gradually increasing. The amount distributed since the year 1859 was £1132 10s.

A COTTAGE HOSPITAL, to contain ten beds, is to be established in Newmarket under the auspices of the Rous Memorial Committee. The institution is intended primarily for the benefit of the racing community; but it is understood that discretionary power will be given to the officials with reference to other applicants for admission.

THE salary of Dr. Turtle, medical officer of the second division of the Hackney Union, has been increased by £20 per annum.

A NEW HOSPITAL, St. John's, was opened at Twickenham on Tuesday by the Duchess of Teck. The building has been erected and largely endowed by the munificence of Miss Twining. A garden party was afterwards given by Dr. Benthall, the resident surgeon, and his wife, in the grounds adjacent to the hospital.

MEDICAL MAGISTRATES.—The late Lord Chancellor, Earl Cairns, before resigning office ordered the name of Mr. J. W. Teale, M.A. Oxon., F.R.C.S., to be added to the Commission of the Peace for the Borough of Scarborough. —Dr. Joseph B. Gilbertson has been placed on the Commission of the Peace for Preston.

ON the 19th inst. the foundation-stone of Kitching's Memorial Cottage Hospital, Milnthorpe, was laid by Mrs. Wm. Bindloss, daughter of the late John Kitching, Esq., M.R.C.S. Eng., L.S.A., when most of the doctors, clergy, and gentry of the neighbourhood were present. Mr. Eli Cox, of Kendal, is the architect. The style of the building is what may be termed modernised domestic Gothic, of a neat but plain description. The front is divided into three wings; the central one will be the residence of the matron; the side wings are wards for men and women, each twenty-one feet long by seventeen feet wide, and fourteen feet high. In the upper part of the central wing there are also two wards for each sex, twenty-seven feet long by eight feet six inches wide; behind the central wing are the kitchens, surgery, mortuary, &c. The hospital will accommodate about twenty patients, and will be built and supported solely at the expense of Mrs. Wm. Bindloss, as a memorial to her late father.

ZYMOTIC DISEASES IN DUBLIN.—During the March quarter the deaths from zymotic diseases amounted to 650, against an average of 476 for the corresponding quarter of the previous ten years. The deaths included 129 from scarlatina, 113 from whooping-cough, 90 from measles, 83 from fever, and 61 from small-pox. As regards the last-named disease the deaths registered have been less than those recorded during any quarter of 1879. Measles was prevalent; and although the deaths from scarlatina were 32 less than those of the preceding quarter, yet the mortality was considerably above the average (73) of the March quarter for the past ten years. There was an epidemic of whooping-cough, 113 deaths having been registered, as compared with 38 in the previous quarter.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Glasgow Royal Infirmary and the Glasgow Western Infirmary have each become entitled to £500 upon the death of the widow of Mr. Alexander Reddoch. Sir Theodore Henry Lavington Brinckman, Bart., of St. Leonards, near Windsor, bequeathed £100 to the Windsor Royal Dispensary and Infirmary. Mr. William Cobbett, of Frimley, bequeathed £100 to the Surrey County Hospital at Guildford. The Duke of Westminster has given £100 to the Westminster Hospital. Mr. G. S. Hayes has given fifty guineas to the Sussex County Hospital at Brighton "in memoriam." Mr. Mark Firth has given £50 to the Ophthalmic Department of the Sheffield General Infirmary. The Corporation of the City of London have given fifty guineas to the City Provident Dispensary and Surgical Appliance Association.

CANINE CONTRIBUTION TO A CHARITY.—The treasurer of the Glasgow Eye Infirmary (says the *Herald and Weekly Free Press*) has just received a contribution from an extraordinary source. Messrs. J. and A. Caldwell, glaziers, Charlotte-street, are the possessors of a retriever dog, "Sankel," of unusual sagacity and very varied accomplishments. Almost everyone who entered the workshop was laid under contribution by the animal, and lately the pence and halfpence so collected, on being counted, were found to amount to the sum of £1, which was accordingly handed over to the institution which "Sankel" had taken under his patronage. Some time ago, Mr. Caldwell having observed a newspaper notice of another canine collector, gave "Sankel" a few lessons in practical charity, and put a contribution box under his care. The lesson was learned at once, and "Sankel" became an unwearied collector, even putting into the box some of the halfpence he had been accustomed to expend in biscuits for his own use.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ADCOCK, H., M.R.C.S.E., has been appointed Medical Officer for the Corby District of the Kettering Union.

AVERILL, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Longton District of the Stoke-upon-Trent Parish.

BARBOUR, J. M., M.B., C.M., has been appointed Medical Inspector of Seamen at Bombay, vice Dr. F. W. Doolittle, deceased.

BAYNES, Mr. J., jun., has been appointed Public Analyst for Beverley, vice Procter, deceased. £2 2s. per annum, and fees.

BECK, J. H. M., M.B. & C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

BENSON, A. H., M.B., has been appointed Assistant-Surgeon to St. Mark's Ophthalmic Hospital, Dublin, vice Story.

BOUCHER, A. H., M.B., C.M., has been appointed Junior Resident Medical Officer to the West Derby Workhouse.

BROWN, Mr. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

CASTLE, H., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucheur to St. Thomas's Hospital.

COX, F., L.R.C.P. & L.R.C.S., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

DAVISON, J. T. R., M.B., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

DAWSON, J., M.D., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Yarmouth Police Force.

DOWNIE, Mr. J. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

FLINN, D. E., L.K.Q.C.P.I., L.R.C.S.I., & L.M., has been appointed Medical Officer and Public Vaccinator for the Ogley Hay District of the Lichfield Union, vice G. H. Lilley, resigned.

FORD, A. V., L.K.Q.C.P.I., M.R.C.S.E., has been appointed one of the Surgeons to the Out-patient Department of the Royal Portsmouth Hospital, vice Turner, resigned.

FRASER, D. A., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Weston-super-Mare Hospital and Dispensary, vice R. Clapp, M.R.C.S.E., L.R.C.P.L., resigned.

GREVES, E. H., M.B. & C.M., has been appointed Non-resident Surgeon's Clerk to the Royal Infirmary, Edinburgh.

HARRIES, A. J., M.R.C.S.E., L.R.C.P.Ed., has been appointed Assistant Medical Officer (for Home Visitation) to the Upper Holloway Branch of the Holloway and North Islington Dispensary.

HARRIS, F. W. H. D., M.R.C.S.E., has been appointed House-Surgeon to the West Kent General Hospital, Maidstone, vice Parish, resigned.

HODGSON, J. W. B., L.R.C.P. & L.R.C.S., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

HUGHES, Mr. T. W., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

JACKSON, Mr. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

JAMIESON, F., M.B., has been appointed Assistant to Professor Struthers, to the end of the year, vice Needham, resigned.

JONES, Mr. J. E., has been appointed a House-Physician to the Glasgow Royal Infirmary.

LINDEMAN, S. H., M.R.C.S.E. & L.S.A.L., has been appointed a House-Surgeon to the West London Hospital, Hammersmith, vice J. Blamey, M.R.C.S.E. & L.S.A.L., resigned.

LUNN, J. R., M.R.C.S.E., L.R.C.P., L.S.A.L., has been appointed Assistant House-Physician to St. Thomas's Hospital.

MCCALL, Mr. J., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

MCFARLANE, Mr. W., has been appointed a House-Physician to the Glasgow Royal Infirmary.

MACKIE, J., L.R.C.S.Ed., L.S.A.L., has been re-elected Medical Officer of Health for the Darlington Rural Sanitary District.

MILLER, H. L., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed House-Surgeon to the Oldham Infirmary, vice Booth, resigned.

MORGENROOD, W. G., L.R.C.P. & L.R.C.S., has been appointed a Resident Physician to the Royal Infirmary, Edinburgh.

O'BRIEN, R. J., M.B., C.M., has been elected Assistant House-Surgeon to the Liverpool Dispensary (in the vacancy caused by the promotion of Dr. O. E. B. Limrick), vice Dr. J. B. J. Brady, House-Surgeon, resigned.

OCHELTREE, Mr. E. G., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

OZANNE, F. N., M.R.C.S.E., has been appointed Resident Clinical Assistant at the Hospital for Consumption and Diseases of the Chest, Brompton.

PECK, J. H., L.R.C.P.Ed. &c., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

PHIBBS, R. F., M.R.C.P.Ed. &c., has been appointed Visiting Physician to the Infirmary for Consumption and Diseases of the Chest, Margaret-street, W.

PRICE, R. G., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer for the Ystradyfodwg Upper District of the Pontypridd Union.

ROBERTSON, Mr. J., has been appointed a Clinical Assistant to the Glasgow Hospital and Dispensary for the Diseases of the Ear.

ROSS, R. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Sherfield District of the Romsey Union.

SAVILL, T. D., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Physician to St. Thomas's Hospital.

SMITH, H. A., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Middlesex Hospital, vice W. C. Jones, resigned.

STEEDMAN, P. A., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Officer to the Harewood District of the Wetherby Union.

STORY, J. B., M.B., M.Ch., has been appointed Surgeon to St. Mark's Ophthalmic Hospital, Dublin, vice Rainsford, deceased.

SUFFERN, A. C., M.D., M.C.Q.U.I., has been appointed Assistant Medical Officer at the Workhouse, Birmingham.

TEMPLEMAN, C., M.B. & C.M., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

THOMAS, H. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Marston-green Cottage Homes, Birmingham.

TIDY, C. M., M.B., M.R.C.S.E., has been reappointed Analyst for the County of Herts for one year.

TILL, G. W., L.R.C.P.Ed., L.F.P.S.G., has been appointed House-Surgeon to the Kidderminster Infirmary, vice Salter.

VIOLETTE, Mr. W. B., has been appointed a Clinical Assistant to the Glasgow Hospital and Dispensary for the Diseases of the Ear.

WALKER, Mr. J. M., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

WALTERS, F. R., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

WELLS, A. P. I., M.R.C.S.E., has been appointed a Resident Surgeon to the Royal Infirmary, Edinburgh.

WILLMOTT, J. J. E., M.D., has been appointed Honorary Consulting Physician to the West of England Sanatorium, vice F. Gourlay, M.D., deceased.

WOOD, Mr. A. F., has been appointed a Resident Physician to the Fever Hospital of the Royal Infirmary, Edinburgh.

YARROW, G. E., M.D., L.R.C.P.L., &c., has been appointed Public Vaccinator for the Parish of St. Luke, Holborn Union, vice E. G. Pottle, deceased.

Births, Marriages, and Deaths.

BIRTHS.

FARMER.—On the 19th inst., at Hexham, the wife of Cottenham Farmer, L.R.C.P.Ed., of a son.

FRASER.—On the 15th inst., at Melville-street, Edinburgh, the wife of Dr. Thomas R. Fraser, F.R.S., Professor of Materia Medica in the University of Edinburgh, of a son.

GARDINER.—On the 21st inst., at 6, Granville-terrace, Merchiston-park, Edinburgh, the wife of T. Senior Gardiner, of a daughter.

MACKENZIE.—On the 24th inst., at Finsbury-square, the wife of Stephen Mackenzie, M.D., F.R.C.P., of a son.

ORMEROD.—On the 16th inst., at Upper Wimpole-street, Cavendish-square, the wife of Joseph Ardorne Ormerod, M.B., of a son.

RAYNER.—On the 20th inst., at Tiviot Dale, Stockport, the wife of Edwin Rayner, M.D., F.R.C.S., of a son.

SCHAFER.—On the 18th inst., at Boreham Wood, Elstree, Herts, the wife of E. A. Schafer, F.R.S., of a daughter.

SPENCER.—On the 17th inst., at Albion-road, Stoke Newington, the wife of E. R. Spencer, L.R.C.P.Ed., M.R.C.S.E., &c., of a daughter.

THOMSON.—On the 24th inst., at Westgate, Peterborough, the wife of William Thomson, M.D., F.R.C.S.Ed., of a son.

WILKINS.—On the 6th inst., at Brixton-road, S.W., the wife of G. H. Wilkins, M.R.C.S.E., L.S.A.L., of a son.

MARRIAGES.

LANG—COLMAN.—On the 22nd inst., at St. Mary Magdalene's, Munster-square, Henry Charles Lang, M.D., F.L.S., of Hernon-street, W., to Rose Gertrude, youngest daughter of George Augustus Colman, Esq., of Adelaide-road, South Hampstead.

SELF—CORSER.—On the 12th inst., at the Parish Church, Stepney, by the Rev. J. E. Symns, M.A. (brother-in-law of the bride), assisted by the Rev. J. Bardsley, Rector, James Self, Esq., M.D., to Robertina Corser, youngest daughter of the late Robert Corser, Esq., of Redhill.

DEATHS.

DASHWOOD.—On the 15th inst., at Norwich, Charles Burton Dashwood, M.R.C.S.E., formerly of Great Yarmouth, in his 73rd year.

EDWARDS.—On the 16th inst., at Tower-street, King's Lynn, John May Edwards, Surgeon, aged 62. Friends, please to accept this intimation.

FARNFIELD.—On the 26th inst., at his residence, 3, St. Saviour's-road, Brixton-rise, Walter Edmund Farnfield, Surgeon (formerly of Fir Grove, 206, Brixton-road), in the 34th year of his age, one week after returning from Australia, whither he had been in the hope of restoring his health. Friends will please accept this intimation.

GREATREX.—On the 8th inst., at Eccleshall, Christopher John Greatrex, Surgeon, in practice before 1815, aged 90.

HILLS.—On the 24th inst., at 34, Bridge-road, West Battersea, London, S.W., George Hills, M.D., F.R.C.S.E., &c., late of Arundel, Sussex (eldest son of the late George and Charlotte Hills, of Arundel and Slindon, Sussex), aged 73.

IMLACH.—On the 14th inst., at Abercromby-square, Henry Imlach, M.D., aged 64.

MILLER.—On the 20th inst., at Scroope-terrace, Cambridge, W. H. Miller, M.D., Professor of Mineralogy in the University of Cambridge, aged 79.

PAYNE.—On the 21st inst., at The College, Northfleet, Charles William Payne, M.R.C.S.E. & L.S.A.L., late of Hoxne, Suffolk, aged 74.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SEA-SICKNESS.

THE *New York Post* describes an arrangement devised by a steamship company with a view to mitigate, if not to avert, the horrors of sea-sickness. The device consists of the fitting-up, in steam vessels, of self-leveling berths. These berths are of ordinary size. They are attached both above and below to universal joints, and are weighted underneath by crescent-shaped cylinders of iron. This arrangement is designed to keep the berths perpetually level, no matter what angle the vessel herself may take. To further maintain the berths in their orbit, and prevent sudden changes of position, they are provided with spiral springs. The efficacy of the plan for the purpose designed has, however, yet to be proved.

Mr. G. P. Field.—The report will be published shortly.

GENERAL LYING-IN HOSPITAL.

To the Editor of THE LANCET.

SIR,—As a member of the committee, consisting of an equal number of physicians and laymen, which has been appointed to inquire into the state of the hospital, and to investigate the complaints of the late medical officers, I ask you to refrain from *ex parte* statements, such as that which appears in your last issue, until the committee have made their report. I also ask you in common fairness to allow me to state that many of the allegations contained in the article to which you have given publication are illusory and untrue.

The paragraph which by implication reflects on the eminent physician whose assistance in the emergency the governors were fortunate enough to obtain, is, to say the least, calculated to mislead. The physicians to the in-patients having resigned, and having intimated their wish for an early release from their responsibilities (although it should be stated that one of them offered to continue his attendance upon such of his patients as might require it), it became the duty of the committee of management to provide some medical attendance for the patients in the hospital, pending the inquiry which is to take place.

It will hardly be suggested that these patients should have been left to the care of the nurses, against whom your article appears to be mainly directed, and that the physician who was asked to undertake these duties should not have been offered a fee for his attendance. The phrase "induced by payment" is hardly appropriate to a process with which most professional men must be familiar.

I am, Sir, your obedient servant,

Savile Club, May 26th, 1880. HENRY OWEN.

*** WE *also* are investigating the case—from a strictly professional standpoint.—ED. L.

ARTISANS' DWELLINGS.

THE plans of the projected buildings to be erected by the Peabody trustees in Whitechapel have been criticised severely by one of the guardians of the Board as unsuitable and unhealthy, being deficient in the matters of light and ventilation. We trust the subject will receive proper attention.

Dr. Allan Jamieson.—Soon.

G. B. had better apply to the Secretaries of the various institutions named.

TREATMENT OF GOUT.

To the Editor of THE LANCET.

SIR,—In your issue of May 22nd, a correspondent asks if the hypodermic injection of morphia has been tried in gout. I am happy to answer him in the affirmative. It acts as a palliative, especially when it induces profuse diaphoresis. Yours obediently,

Harley-street, May 22nd, 1880. J. M. WINN, M.D.

A HUGE CALCULUS.

THE *Boston Medical and Surgical Journal* reports the removal by Dr. Hodgen, of St. Louis, of a vesical calculus, weighing one pound six ounces avoirdupois. The stone was spherical, and measured eleven inches and a half in circumference, and four inches in diameter. Removal was effected by the supra-pubic operation, and the calculus was necessarily broken. The patient's age was sixty-two. Fifteen years previously he had had two stones extracted from the bladder by Dr. Pope, after which he had enjoyed good health, with the exception of occasional vesical irritation and incontinence, until the time of undergoing the first-mentioned operation.

Multiplex takes a view of the relations of the medical profession with hospital work which is wholly at variance with the facts, and which we must leave him to expound elsewhere.

Dr. Sinclair, (Dundee.)—We shall be glad to receive the paper; but it should be as concise as possible.

MEASLES FATALITY IN PLYMOUTH.

To the Editor of THE LANCET.

SIR,—I have read your remarks in THE LANCET of April 17th on the above subject, and I think a reply is required from me as medical officer of health of this borough.

As regards the cause of the present epidemic in this locality ("the three towns," Plymouth, Stonehouse, and Devonport), it is directly traceable to the landing of infected persons from a troopship which arrived in Plymouth Sound about a year ago. The battalion, I am informed, was marched "direct into barracks" at Devonport without undergoing quarantine, and not long afterwards the disease manifested itself in all parts of that town, sweeping off children wholesale. By degrees the infection spread into Stonehouse, and such was the hold it took in that town that the general death-rate at one time rose to above 80 per 1000. About the middle of last November the disease carried off its first victims in Plymouth. For a few weeks the deaths were not very numerous, but eventually it became evident this town was also to become a hot-bed of measles. For the four weeks ending the 1st of the present month, 186 deaths were registered in Plymouth, and of these, 73, or about two-fifths, were from measles. During the present week 44 deaths have been registered, of which 23 were from measles, thus leaving but a small mortality from other causes. Of persons under five years of age there were 33 deaths, or three-fourths of the whole. Having shown the origin of the present epidemic is not due to sanitary defects, it may still be asked, How can the persistence and fatality of the disease be accounted for? The answer is easy. The greater portion of old Plymouth consists of large houses, once occupied by well-to-do merchants and tradesmen, but now by the working classes, and, in the majority of cases, each room of a house contains an entire family. This evil also exists in other parts of the town. It is evident that if infection make its appearance in such overcrowded dwellings, it spreads with alarming rapidity, and the disease, as in an ordinary fever hospital, frequently assumes a severe type, and consequently is more fatal than under opposite conditions. Cold and damp have also materially affected the sufferers from measles by producing lung complications.

I am informed, on good authority, that Her Majesty's troopship *Malabar* arrived at Portsmouth from Bombay about the middle of last month, having measles infection on board. My informant states that about four days after leaving Bombay an epidemic of measles appeared in the ship, from which six or more children died, and that at the termination of the voyage, among those who disembarked, were a widow and family, who were allowed to go straight from the infected ship by train to the Raglan Barracks at Devonport! Three days afterwards one of the children was laid down with measles, and thus may be the means of infecting all those children who have escaped the recent epidemic in that town. It would thus appear that whilst the Local Government Board employs an able staff to watch over the health of the community, another branch of Her Majesty's service is sowing infection broadcast. Why during many years the average death-rate from measles was higher, and that from scarlet fever was lower, in Plymouth than in Portsmouth I cannot say. Certainly the one fact is no more discreditable than the other.

As regards the high infant mortality in Plymouth, the overcrowding of families, causing an impure atmosphere in the houses of the working classes, and facilitating the spread of infection, is quite sufficient to account for it. With respect to general death-rates, I have shown elsewhere they are a most unreliable means for comparing the health of one district with that of another, unless the two districts can be judged by the same standards, density of population being most important. It is on this account the Registrar-General's Weekly Returns, as published without explanation in the public press, convey such a false impression as to the health of a given district. A large portion of the best part of Plymouth lies outside the municipal boundary, and its low death-rate, therefore, cannot be used as a set off against the higher rate of the crowded parts within the boundary. I believe, also, the next census will show in a marked degree there is a much larger population in this borough than is generally supposed, the influx from other places having been very great. I do not mean to assert that overcrowding is the only fault in this town, but it is certainly the chief, and I fear it is of such magnitude that it can only be successfully dealt with by the granting of special powers to the local Corporation.

I am, Sir, yours obediently,

Plymouth, May 15th, 1880. HENRY GREENWAY.

SUICIDES.

THE director of an asylum for inebriates in Germany has collected statistics of suicides in different countries of Europe. His data go to show that the fewest cases of self-destruction occur in Norway. In most German countries the number of suicides has increased by from 90 to 100 per cent. For each million of inhabitants there are now on an average every year in Saxony 300 cases of suicide, in Denmark 280, in Würtemburg 180, in Mecklenburg 167, in Baden 156, in Prussia 133, in Austria 122, in Bavaria 103, in Sweden 81, in Belgium 73, and in Norway 40.

Birmingham.—We quite agree that insufficient attention is given to these maladies; hence sufferers are left to be the prey of quacks.

Dr. Sturges.—The paper has been received.

THE TITLE OF "DOCTOR"

To the Editor of THE LANCET.

SIR,—I should be glad if you would allow the enclosed space in your journal, my desire being to ascertain the opinion of yourself and others.

I enclose my card. Yours &c.,

May, 1880. ——— ———.

May 11th, 1880.

DEAR SIR,—I should wish to ask you the question if the College of Physicians of Edinburgh allow their licentiates to assume and place upon their door-plates the title of "doctor." In this place Mr. —— resides, a licentiate of your College, who has on his plate Dr. ——, and is commonly called Dr. ——. I am also living in the same place, and have on my plate —— ——, M.D., and am commonly called Mr. ——. I must say I do not like such turning of the tables. I am also a member of your College, but never understood that I was entitled to call myself Dr. previous to taking my M.D. If your College do not allow, and have not the power of granting, such a designation, it would only be fair of you to acquaint your offending licentiate that he is assuming a title which renders him amenable to the law.

I am, dear Sir, yours faithfully,

——— ———.

To this I received the following reply:—

Royal College of Physicians, Edinburgh,
May 14th, 1880.

DEAR SIR,—I am afraid the College cannot interfere in the case you refer to. The College has never encouraged its licentiates to assume the title of Dr., as they believe that that title legally belongs only to graduates of the Universities who hold the degree of M.D.; but there is no law of the College forbidding the licentiates to use the title.

Yours faithfully,

——— ———.

Mr. W. A. Wynne.—1. Chemistry and Microscopy: Beale on Urinary Deposits, and H. Vandyke Carter on the Microscopical Structure and Mode of Formation of Urinary Calculi.—2. Surgery: Sir Henry Thompson's Clinical Lectures on Lithotomy and Lithotrity.

M.B.—Dr. Macpherson's.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if you will insert in your next impression a correction of the paragraph which appeared in your issue of the 22nd instant.

I am, and have been for the last fourteen years, the medical officer of health, and since the passing of the Adulteration of Food Act the public analyst, of St. George-in-the-East. These appointments I hold under the Vestry, and not under the Board of Guardians. It was in thanking my Board for their kindness when I tendered, and when I was permitted to withdraw, my resignation that I alluded to my long connexion with the parish, and to the fact that two out of my three predecessors had broken down at the head. It was then very feelingly proposed, and unanimously agreed to, that I should have two months' leave of absence.

Yours faithfully,

JOHN JAMES RYGATE, M.R. Lond., &c.

Cannon-street Hotel, May 26th, 1880.

Querist says:—"A patient of mine is invariably the better for two grains of opium at bedtime. No other narcotic suits him so well. Unfortunately the opium always produces constipation and clay-coloured stools." He asks, How can these latter be best prevented?

Mr. F. S. Coombs.—Thanks.

A QUERY.

To the Editor of THE LANCET.

SIR,—Kindly allow me to ask information as to the following case through the medium of your journal:—

A lady, aged forty-five; menses ceased two years since; confirmed dyspeptic; suffering now for the last three weeks from an eruption, answering in all respects the description given of lichen planus by Tilbury FOX—i.e., papules discrete at first, afterwards grouping into patches, which become red, infiltrated and slightly scaly, in which latter respect they somewhat resemble psoriasis; itching and smarting intolerable. If any of your readers will be good enough to give me a few hints as to the probable duration of the eruption, treatment local and constitutional (diathesis distinctly rheumatic), I shall consider it a favour.

Yours &c.,

May 18th, 1880. H. G D

SOCIETY FOR PROVIDING NURSES FOR THE SICK POOR OF BELFAST.

IT is gratifying to learn that sympathy with the aim of this charitable Society is steadily increasing. During the past year nearly 700 sick persons were attended at their own homes by the nurses, under the supervision of the ladies, at the cost of some £600. This sum includes the wages of nurses, nourishment for patients, medical appliances, and other expenses. The Society is non-sectarian, and its principal object is to relieve the suffering and help the destitute.

THE publication of *Dr. Stephen Mackenzie's* letter is unavoidably postponed until next week.

EXPERIMENTAL INQUIRY INTO HABITUAL TOBACCO-SMOKING (TOLERATED NICOTISM).

To the Editor of THE LANCET.

SIR,—It seems to me that in the vexed question of tobacco-smoking and its effects the proper line of investigation has not yet been followed, and that only vague and general surmises have found their way to publicity. I beg to send a modicum of experimental inquiry, which was interrupted, it is true, but which I conceive will indicate the only practical method of arriving at anything like an elucidation of the tobacco mystery.

The pulses of some gentlemen having been carefully noted after dinner and before smoking, a comparison was made with their character after a cigar. All were, as most Indians are, free smokers, in whom tolerance had long been established, and all experienced the wish to smoke. Two were rather free drinkers, and one was a water-drinker. The pulse of the water-drinker rose nine beats per minute after smoking, and a general sense of comfort was felt. In the case of the free drinkers there was no perceptible alteration of the pulse. In the other four individuals the pulse rose, without exception, from three to five beats per minute, and a feeling of comfort (?) was experienced by all.

Tobacco, when tolerance is established, differs *toto cœlo* in its action from itself when administered to persons accustomed to its use, and it is only when a long series of experiments on the lines above shadowed forth shall have been made, including sphygmographic tracings (?), temperature, and subsequent behaviour of the pulse, that anything like a satisfactory conclusion will be come at.

In the above series the pulse of those who did not indulge after dinner in brandy and soda-water returned on going to bed to its former state—most markedly that of the water-drinker, which from childhood had been slow (average 68 to 70); but he declared that it was always slowest in the morning after compulsory abstinence during sleep. Tea, coffee, or a "gallop" on horseback produced the same sense of comfort that a pipe did, and, unlike alcohol, were followed by no unpleasant reaction, save a desire for rest (natural after all healthy stimulation). The craving for tobacco was most marked after meals.

Conclusions.—Tobacco would appear, after tolerance is established, to be a cardiac stimulant (objectively), and a nervous sedative (psychologically and subjectively). The smoker thinks he is only being soothed. It will be found that he is vascularly stimulated in almost every case where excess of alcohol has not already produced the maximum of cardiac beats. But with alcohol the pulse becomes generally weaker, and often more rapid afterwards. After tobacco it would appear to return to its normal state. I found my symposium intractable. Gentlemen would not submit to a repetition of the experiment, nor give me a record of their pulse on going to bed, nor regulate the quantity of alcohol taken. The inquiry, however, is not difficult. The very different behaviour of tobacco, after tolerance is established, in comparison with its nauseating and depressing effects on the uninitiated, is not a solitary fact. Confirmed opium-eaters have in India frequently informed me that they would be awake all night if they took opium after 5 P.M. or so. *I have seen bromide of potassium cause waking dreams, and chloral produce delirium (in two cases very markedly).* They had to be abandoned.

Yours obediently,

C. MACDOWALL, F.R.C.S.E., &c.,
Indian Army.

Fifeshire, May, 1880.

*** We call special attention to this letter for the sake of the remark at the close about chloral and bromide of potassium, which we have printed in italics. It is in accord with many other expressions of opinion and experience with which we have been favoured, and is worthy of full consideration.—ED. L.

Dr. Harvey.—Dr. J. C. Reid, of Newbiggen-by-the-Sea, lately gave an account of a visit to a Home for Inebriate Ladies—Mrs. Theobald's, Tower House, Leicester—to a conjoint meeting of the North of England and Border Counties Branches of the British Medical Association, held at Gilsland. This account seems to show that good can be done by seclusion, accompanied with absolute abstention from alcohol and all apologies for it, such as sal volatile, eau de Cologne, camphor, &c. The plan adopted would appear to consist chiefly in good food, very punctual meals, cheerfulness and encouragement, pleasant occupations, work, music, &c. &c. The system is entirely voluntary, subject to one month's notice. Dr. Reid says "the many saved by kind restraint have been to Mrs. Theobald a comfort and a stimulus."

Mr. J. Gaunett Horder.—Dr. Morell Mackenzie's.

HARICOT BEANS.

MR. JAMES MULLAN, L.F.P.S., has called attention in the *Glasgow Herald* to the danger attending the ingestion in any considerable quantity of uncooked haricot beans. Mr. Mullan was called to visit a man in Gatlands, suffering from severe vomiting and purging, with cramps in the lower extremities. A little girl in the house was also suffering from the same symptoms. On inquiry both patients were found to have partaken freely of haricot beans in the raw state.

SCIRRHUS OF THE BREAST.

To the Editor of THE LANCET.

SIR,—I infer from the report of the discussion on the case of cancerous tumour of the breast at the meeting of the Pathological Society, as it appears in your last issue, that I could not in my reply have expressed my meaning very clearly, and I shall be much obliged if, in order to prevent my views being misunderstood, you will allow me to state that when I say that adenomas of the breast do not exist, I mean to imply that the growths usually designated by this name are not, in my opinion, composed of gland-tissue. By saying that if the growth is circumscribed it is called an adenoma, and when infiltrated it is called a scirrhus, I mean that the specific growths, of which the tumour I had described was an instance, are so named, respectively, by surgeons, according as they are circumscribed or infiltrated. The great majority of tumours diagnosed as scirrhus belong, in my opinion, to another variety of epithelial tumour, which histologically has specific characters. The term scirrhus is therefore, I believe, ambiguous, as it is made to cover two kinds of epithelial growth; and the term adenoma is also ambiguous, as, by long usance, it has been restricted to the most common form of the tumour to which it refers, but would not be willingly extended by surgeons to the rarer and more malignant types of which Mr. Lister's case was an example, although by no means an extreme one.

I am, Sir, your obedient servant,

Queen Anne-street, May 24th, 1880. G. THIN, M.D.

Ad unitem tendo.—Our correspondent is thanked for his communication, which we regret we cannot insert. We have nowhere advocated "the admission of the medical officers of the Guards to the administrative ranks on the same scale as has been granted to officers of the A.M.D. by the Warrant of 27th November, 1879." Several of the advantages he refers to are imaginary, and his proposed scheme of organisation, if not impracticable, would at least have no chance of being adopted.

SUPRA-PUBIC PUNCTURE OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—At page 750 of your journal Mr. Marsh writes thus: "For a brief but complete vindication of this operation (of supra-pubic puncture of the bladder in obstinate retention) and my own originality in adopting it, allow me to refer your readers to the *British Medical Journal*, January, 1879. I cannot understand how it is that the operation is so little known or practised." If Mr. Marsh will turn to the *Medical Times and Gazette*, September, 1852, p. 269, he will there find a paper by Mr. Maund, criticising Mr. B. Cooper, who spoke adversely of the operation in a valuable clinical lecture upon Retention. Further, if Mr. Marsh will refer to section 1051 of the "Medical Digest," he will find that Sir James Paget, Messrs. Hulke, Dittel, Fleury, and others have written upon the subject, and since the publication of that work Mr. Howse read notes of a case at the Clinical Society (THE LANCET, November, 1878, p. 623); while Sir Henry Thompson at the Royal Medical and Chirurgical Society read a paper on the Treatment of Enlarged Prostate, leading to retention, by the insertion of a supra-pubic tube *en permanence*, which was followed by an interesting discussion (THE LANCET, July, 1879, p. 809).

Yours truly,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, May 22nd, 1880.

F.R.C.S.—A very strong dose of coffee administered shortly before the distressing head symptoms come on might prevent the paroxysm, and enable the injection to be gradually withdrawn. We will hold the letter over until hearing the result of this experiment.

"CRUELTY TO WOMEN."

To the Editor of THE LANCET.

SIR,—In reference to your annotation of last week, I beg to inform you that seats are provided in my shops and show-rooms for the female assistants, and no restriction is placed on their use when they are not serving customers. I am under the impression that this is the case in most of the West-end drapery houses, and should be very glad if it were general in both large and small "houses" throughout London.

I am, Sir, yours respectfully,

Oxford-street, May 22nd, 1880. PETER ROBINSON.

To the Editor of THE LANCET.

SIR,—For the past three years I have had seats behind my counters, on which the young lady assistants have full liberty to sit when not engaged in serving customers.

Yours obediently,

Buckingham Palace-road, May 20th, 1880. H. HOADLEY.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Peacock, London; Dr. Thin, London; Dr. F. de H. Hall, London; Mr. Teevan, London; Professor Buchanan, Glasgow; Mr. Thornton; Dr. Neale; Mr. Isbister; Mr. Hartill, Willenhall; Messrs. Harman and Matthews; Mr. Ablett; Mr. Custance, London; Mr. Wood, London; Mr. Wynne, Brigg; Messrs. Griffin and Co., London; Dr. Williamson, London; Dr. Rayne; Mr. Howley, London; Mr. Baird, Syston; Mr. Larkin; Mr. Malcolm, Birmingham; Mr. Egan; Mr. Barnard; Dr. Sinclair, Dundee; Mr. Hoadley, London; Dr. Bowles, Folkestone; Mr. Tovey; Messrs. Bertram and Roberts; Dr. Gillespie; Dr. Richardson, Newhaven; Mr. Ranking, Kingsbridge; Mr. Moore, Cavan; Mr. Manby, Cannock; Mr. Horder, Crockherbtown; Mr. Meadows, Hastings; Messrs. Eisler, Barnard, and Co.; Mr. Massingham; Mr. S. Watson; Mr. Mann; Dr. Nedley; Dr. Raymond, Brooklyn; Mr. P. Robinson; Messrs. Wookey and Co.; Mr. Callender, Dunscon; Mr. Dewdney, Chepstow; Dr. Potter; Mr. Havers, Berkhampstead; Dr. Day, London; Mr. Brett, Watford; Mr. Phipps, Edinburgh; Mr. Whiteley; Dr. Young, Malton; Dr. Ewart, Brighton; Messrs. Fidler and Co.; Mr. Wokey; Mr. Godlee, London; Mr. Stewart, London; Mr. Wigner; Mr. F. Jordan, Birmingham; Mr. Hollins, Eastbourne; Dr. Newman, Stamford; Dr. Macewen, Glasgow; Dr. Cooper Rose, Hampstead; Mr. J. Collins, London; Dr. Jacobs; Mr. W. J. Coulson; Dr. Cousins, Southsea; Mr. Eli Cox; Mr. Sothern; Dr. Godson; Mr. G. H. Rigby; Mr. Swinhoe; Dr. Philippa; Dr. A. L. Browne; Mr. Whittingham; Dr. Harvey; Mr. J. S. Smith, Worthing; Dr. Christie; Dr. Dutrieux; Mr. Armstrong; Mr. Coombe; Mr. England, Kettlewell; Mr. Field, London; Messrs. Kerby and Endean; Mr. Harrison, Sunderland; Dr. Berkart, London; Messrs. Mottershead and Co., Manchester; Dr. Thomson, Peterborough; Mr. Thomas, London; Mr. Arrowsmith, Bristol; Messrs. Watson and Co., London; J. G. X., Buenos Ayres; A Medical Officer of a Metropolitan Workhouse; G. B.; M.D., Kells; Anacharis; 54; Umano; H. G.; Kilogramme; A. L. F.; St. J. B., Clapham; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Kennedy, Dublin; Dr. Meadows, Leicester; Mr. Tring, Lechlade; Mr. Young, Chilton Polden; Mr. Morgan, Whitnash; Mr. Gibbons, Edinburgh; Mr. Davison, Whitehaven; Mr. Howell, Carmarthen; Mr. Randall, Bridgend; Mr. Kinder, Leicester; Messrs. Swithenbank and Co., Bristol; Messrs. Grace and Co.; Dr. Ridge, Enfield; Dr. Franklyn, London; Dr. Meadows, London; Mrs. Gee, Knutsford; Mr. Rutter, Notting-hill; Mrs. Ravenhill, Aylesbury; Mr. Luxton, Tavistock; Mr. Bottomley, Ashton-under-Lyne; Messrs. Macniven and Cameron, Edinburgh; Mr. Shirtliff, Kingston-on-Thames; Dr. Wright, Wellingborough; Dr. Drysdale, London; G. C. T., Alresford; A. B., Macclesfield; Alpha, Coleman-street; Medicus, Chesham; Quid pro Quo; Alpha, Aberdeen; Photo, Littleborough; J. M., Barnsley; Surgeon, Kent-road; H., Sherburn; H. P., Bowness; M. B., Aldborough; F. C.; H. P. N., Newcross; Physician, Coventry-street; Confidential; B. H., Pimlico; J. E. B., Lowestoft; A. B., Holloway; Sister, Winchester; H. M., Holsworthy; G. C. H.; Montague, Paddington; M.D., Packington-street; &c.

Insurance Guardian, Bazaar, Canada Lancet, Student's Journal, Darwen News, Republican, Morningside Mirror, Freemason, Mayo Examiner, Philadelphia Medical Times, Glasgow Herald, Leeds Express, Oracle, El Jurado Médico-Farmacéutico, Boston Medical and Surgical Journal, Medical Record, Cookeeper and Dairyman's Journal, Capital and Labour, Northern Evening Express, L'Union Médicale, Philadelphia Medical Times, Brighton Guardian, Canadian Journal of Medical Science, La Independencia Médica, Worthing Intelligencer, &c. &c., have been received.

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METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, May 27th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 21	30·23	S.W.	60°	56	110	77	51	..	Fine
" 22	29·87	W.	60	52	81	63	51	..	Cloudy
" 23	29·91	W.	59	53	88	66	52	..	Cloudy
" 24	29·85	W.	60	54	91	65	51	..	Cloudy
" 25	30·07	W.	59	54	107	75	50	..	Cloudy
" 26	29·98	W.	68	59	115	85	53	..	Cloudy
" 27	29·68	W.	68	61	114	74	62	..	Cloudy

Medical Diary for the ensuing Week.

Monday, May 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, June 1.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. Fiske, "On American Political Ideas."

Wednesday, June 2.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M. — 5 P.M. Mr. Osman Vincent, "On Genu Valgum and Rachitic Deformities."
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Butlin, "On the Relations of Sarcoma to Carcinoma."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Chalmers, Dr. Galabin, and others.—Papers: Dr. Chas. Carter, "On Extra-uterine Fœtation."—Dr. Grally Hewitt: "Report on Sixty-seven Cases of Uterine Distortion or Displacement, treated during seven years at All Saints' Institution."
EPIDEMIOLOGICAL SOCIETY.—8 P.M. Annual General Meeting: Election of Officers; Report of the Council.—Surgeon-General C. R. Francis, "On Endemic Plague in India."

Thursday, June 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. T. W. R. Davids, "On Buddhist Sacred Books."
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Butlin, "On the Relations of Sarcoma to Carcinoma."

Friday, June 4.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Butlin, "On the Relations of Sarcoma to Carcinoma."
ROYAL INSTITUTION.—3 P.M. Evening Meeting.—9 P.M. Mr. H. H. Statham: "An Analysis of Ornament."

Saturday, June 5.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On the Dramatists before Shakespeare."

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